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INSTINCT AND REASON,

PHILOSOPHICALLY INVESTIGATED;

WITH A VIEW TO ASCERTAIN

THE

P R I N C I P L E S

OF THE

SCIENCE OF EDUCATION.

BY

THOMAS JARROLD, M.D.

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TO

JOHN DALTON, L.L.D.

F. R. S., &c. &c

I inscribe this Work to you, as a tribute to your eminence as a Philosopher, and, also, as an appropriate offering from one, who, as your fellow-townsmen, has been, for many years, a near admirer of your Genius and Character.

It is true, the pursuits and discoveries by which your Name is so honorably conspicuous in the present age, and, by which, constellated with those of the primary philosophical luminaries it will go down to the remotest future, have not immediately referred to the Intellectual constitution of Man; yet, no man, more than yourself, has elucidated the close correspondence and reciprocity which exist among the varied applications of philosophy, whether to the elementary principles of Matter, or, to the phenomena of Mind.

DEDICATION.

To you, who have, so strikingly, exemplified the power of Mind to extend the boundaries of physical knowledge, and of physical knowledge to enlarge the capacity of the Mind, and, who have, also, with dignified condescension, devoted yourself to the instruction of the young, it will not be uncongenial to countenance an attempt to open some new lights into the chamber of Educational Science.

THOMAS JARROLD.

Manchester, December 21, 1836.

P R E F A C E.

THE Author is aware of the general disposition of the Readers, of the present day, to prefer Works of Narrative, of Imagination, and of Taste, to those which have a Philosophical character ; nor does he wish to conceal, that this acknowledged preference has thrown difficulties in the way of his attempts to make arrangements for the publication of the following Treatise. Yet he is not without hope of finding acceptance with the Public, for a Work on a subject which is, not only, of the highest importance, but one, the Interest of which will be more than usually felt, owing to the frequent discussions which are now taking place with respect to the best methods of diffusing Instruction, and to the spirit which has given birth to the great National Charter of Education.

PREFACE.

He has only to add, that this work contains an elucidation and enlargement of the principles and reasonings of his Reply to the late Professor Malthus; and to express his hope that it will throw some new light on the topics which it investigates, and furnish some Rules for the management of a process, which has, hitherto, been but vaguely conducted.

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INTRODUCTION.

Science had scarcely dawned upon the mind, when the moral state and mental destiny of man commanded a marked and solicitous attention. What am I? By what agency am I connected with the material world, and why do I anticipate an existence in another? are questions which the circumstances of man place before him. Dignified in their own estimation by the grandeur of the subject, Philosophers apprehended themselves able to penetrate the mind and discover its secret workings, and analyze its properties, but the attempt proved their incapacity.

Unable to comprehend its own essence, the mind cannot analyze itself: even the existence of external nature is not proved by an appeal to reason. The tree, covered with foliage, and the field with verdure, are known to us only by our senses; we think they are as they seem to us to be, but we know not whether we have the power of ascertaining the fact, or whether thought be a cause or an effect: had this point been established, or had any preliminary knowledge been acquired, one hypothesis would not have

succeeded another, bearing testimony not to the strength but to the weakness of the human mind.

At an early period of the world's history, Plato taught that the external perceptions of the mind are the primitive or intellectual patterns from which the forms and other qualities of objects have been taken. According to Aristotle, unsubstantial pictures of them as though reflected from a mirror, according to Epicurus substantial or material effigies. The hypothesis of Aristotle guided the opinions and became the text-book of the Philosophers of Europe, till Des Cartes attacked and overthrew it, who substituted in its place the doctrine of innate ideas. This hypothesis maintained an ascendancy for about a century, when it gave way to the forcible reasoning of Locke. Some time after, Dr. Reid offered another hypothesis, opposed to that of Locke and to that whole class of mental philosophers, who, treading in the steps of the ancient sceptics, of whom were Pyrrho and Arsesias, raised many similar difficulties and denied many positions, which had obtained general assent. Hartley, Hume, and Berkeley stood forward as the champions of these systems, which ever have been, and probably ever will be, rejected by mankind. Dr. Reid's hypothesis, as stated by Dr. Good, is as follows:—"There exists in the mind of man various ideas or conceptions, both physical and metaphysical, which we have never derived either from sensation or reflection. There must therefore exist, somewhere or other in the animal frame, a third precipitent principle, from which alone such ideas can have been derived. From this additional principle

there is no appeal : it is higher in its knowledge, and surer in its decision, than either the senses or the reason : it compels our assent in a variety of cases, in which we should otherwise be left in the most distressing doubt ; and gives us an assurance, not only that there is an external world around us, but that the primary and secondary qualities of bodies exist equally and uniformly in bodies themselves, or, in other words, that every thing is actually as it appears to be. This mandatory or superior principle is *Common Sense or Instinct*." But do not the terms ideas, phantasms, and species, used by Plato, Aristotle, and Epicurus, convey as distinct a conception of the understanding as the common sense of Dr. Reid ? For what is common sense or instinct, as applied to the understanding,—are they modes of thought, or are they influences which render thought unnecessary ?^(a)

From these statements it is evident that, after 2000 years of unremitting research and profound attention, the subject remains as obscure as when the inquiry commenced, and probably ever will ; for the question is not how does the mind manifest itself, and what is the extent of its capacity, but what is its very essence, and how are the elements of thought collected and retained in the mind, so that it acts upon them and produces thought, are questions of no practical utility, and therefore the search for their solution is vain. But such are the questions, however disguised, which the Metaphysician has proposed—if they still invite inquiry, it is only to disappoint. Our object will be

(a) See this subject more fully discussed in Dr. Good's "Book of Nature."

to gain a knowledge of the laws of the mind, in the same way that the knowledge of other laws have been obtained, not by inquiring into what it is in itself, but how it operates. The mind will ever be unknown to us in its elements, and can only be comprehended in its operations. Should there be any students, who are undaunted at the defeat of others, they will here find ample scope for their concentrated powers. A much humbler course awaits us, we leave the inquiry into its essence or mode of acting to others—we presume on no system—all we aim at is to draw attention to the subject of education as a Science, by which the mind is taught, elevated, and strengthened, and which naturally results from a practical inquiry into the powers of the mind.

Believing that every operation in nature, whether physical or otherwise, is connected with one of its laws, we venture to place the developement of the mind in the number, and claim for it a certain and definite principle, by which it may obtain the full exercise of its faculties.

By reasoning from facts, Astronomy and Chemistry, and every other science, were discovered Theories, on these subjects succeeded each other, but the facts remained, and when they became numerous, some Master-mind viewed them in relation to each other, and discovered a principle in which all harmonized and by which all are directed. I ask for the same system to be pursued with respect to the mind. The astronomer did not bewilder himself in speculations on the nature and elements of gravitation, but he studied its effects, and

so ascertained that a power exists in nature having an influence on matter; and by similar means other discoveries have been made, and the mind at the same time strengthened. That bodies gravitate or have weight, that every atom has its own express affinities, by which it unites with other atoms, and thus form a substance of a specific character, are a part of such discoveries: sugar, for instance, contains, in certain proportions, oxygen, hydrogen, and carbon; other vegetable substances are formed by other proportions of the same atoms. Such discoveries all refer to some law, which determines the qualities of natural substances, and are laws ordained for matter, and not for the mind. Is it alone, of all the works of God, without a principle by which its powers may be elicited and directed?

The ignorance and imbecility of infancy are only overcome by instruction, and how is this to be rightly administered, if directed by caprice or accident? Do laws give to the elements of the natural world order and beauty, and utility, and is the mind left to its native helplessness? Impossible. Facts, already known, point to some principle or law of the mind, relating to education, by which it may acquire its full capacity, and the moral habits be conformed to the good of society. We do not intend to say that man can of himself recover his moral rectitude. This we know he cannot do. But we contend that education may be greatly perfected, and its result insured and made accessible and common to all mankind, by a right understanding of the laws of the mind.

In vain Philosophers have sought to discover in what way the elements of thought were directed, so as to be received by the understanding ; but an investigation of the laws of the mind, not by an inquiry into their character, but into their operations, promise a higher reward. The first step towards which appears to us to be a clear and distinct comprehension of the absolute and characteristic difference that exists between Reason and Instinct, and which will form the first subject of inquiry.

OF THE DEFINITIONS WHICH HAVE BEEN GIVEN
OF INSTINCT.

Instinct, although long known as a great and influential Power, has yet been so little investigated, that its principle of action is involved in doubt, and the limits of its influence are undefined. Whether it approaches the confines of Reason, and there maintains a distinct and separate government, or whether it passes over, and, amalgamating with that faculty, loses its discriminating character, has never been determined. The Moralist, the Philosopher, and the Historian, regard the force of Instinct as subdued and broken by Reason, and of no importance in forming the character of man : no action, in their estimation, is characterised by its influence, no deed bears the impress of its instigation.

Reason, it is contended, in its feeblest state, puts forth a power of so much greater dignity and influence than Instinct, as to conceal its existence, and man, being subject to Reason, and judged by its laws, gives to it his whole attention in the education of his offspring. It is the purport of the present work to shew that Instinct claims at least an equal care with Reason, and that it exercises at least an equal influence on the general character. The force of Instinct is certain in its influence, while that of Reason

is conditional. Instinct is spontaneous in its operation, while Reason is constrained and forced. Instinct is early impressed, Reason resists impressions. But it may be asked, what is Instinct? Philosophers who, on other subjects have earned a just renown, on this have put their reputation to hazard. Imagining that operations, rendered so familiar by the frequency of their recurrence, and the uniformity of their results, had been grasped and comprehended by ordinary minds, they relaxed in their inquiries, and substituted popular opinion, for investigated truth: and, confiding in the accuracy of their knowledge, have concentrated it in definitions according with their information.

Dr. Reid has enumerated several, we commence with his own, and are indebted for others. He defines Instinct to be "a Natural blind impulse to certain actions, without having any end in view; without deliberation, and often without any conception of what they do." He further considers Instinct "as one species of the mechanical principle, the other being habit." Dr. Mason defines it to be "A simple operation of the principle of organized life, by the exercise of certain natural powers, directed to the present or the future good of the individual." Other Philosophers have made Instinct to be a certain plastic nature; or they ascribe it to habit, association, or experience. Dr. Paley, whose definition is generally received, describes it to be "a Propensity, prior to experience, and without instruction." Smellie, with greater boldness, asserts "That between Instinct and Reason there is no difference; that the reasoning faculty is

the natural result of Instinct." Dr. Good admits that reason is united in brutes, with sensation and Instinct. Locke had previously advanced a similar opinion. That great man supposes "that animals do, in certain instances, reason; as that they have sense." Dr. Hancock takes the same view, and adopts the same language. In no one of these definitions does Instinct assume a definite character: for the question still presents itself—What is Instinct, and in what is it distinguished from Reason? In most definitions, Instinct and Reason are united, and form a character in common.

It is unnecessary to remark on each definition, but some claim attention. That by Dr. Paley being most popular, merits the first notice. The Doctor defines "Instinct to be a propensity prior to experience, and independent of instruction." Unless animals are rational, the latter part does not belong to them; which reduces the definition to this, that instinct is a propensity: with like fitness it may be said that a propensity is instinct. The definition then reads instinct is prior to experience—an undoubted fact—but a fact is not a definition. A Seal has sometimes a propensity to be in the water, sometimes on the land; a Bird has sometimes a propensity to fly, sometimes to rest? Is this instinct, or is the propensity physical, and agreeable to animal sensibility? Mere sensibility is not instinct, nor prior to it. If a wound be inflicted, its pain is not that of instinct, nor is the propensity to gain relief prior to the instinct which directs it. The Seasons produce sensation, but this is not instinct nor a propensity: no law is in

operation but the mere existence of personal feeling. Sensation is, in some animals, equivalent to existence; but this is not instinct. A lamb skips and bounds across a meadow, with all the delight its nature is susceptible of; a propensity to action and the charm of existence originated the gambol; no express object instigated and no consequence was apprehended; physical gratification excited the action—it was a propensity: but a wolf appears, and the playfulness gives way to a sense of danger and to the most prompt and efficient means of escape. Did the lamb reason in the present emergency? or was it directed by instinct? Certainly it did not reason: for before that faculty could have been exercised it would have fallen a victim. It was therefore a Propensity. And can a propensity be so far unembarrassed by ignorance and unchecked by contending passions as to act the part of reason? Is not a propensity fixed and unalterable in its operations? A glance arrested its physical pleasure, and put the lamb, not under a propensity, but under an active power, directed by intelligence. The appropriate and active measures of the lamb could not form part of a propensity, to a definite and almost a mechanical action. A Propensity, therefore, cannot represent Instinct.

The next definition to be noticed is that of Locke, which ascribes reason to animals. Had this great man apprehended the result of his declaration, he would have re-considered it, because it saps the foundation of man's immortality, and blasts the hope that is within him. If animals, in any case, can reason, they can worship. Its feeblest glimmering, as it

beams from the mind of the most ignorant and savage of our race, is expressed in adoration—an unseen power is acknowledged, before which they prostrate themselves. No animal thus approaches its Maker. Worship implies rationality, and demands its homage. An idiot cannot worship : an animal does not require its benefits. An unknown power, concealed in instinct, supplies their wants and satisfies their desires ; to them no good is contingent or dependent on themselves ; they are without solicitude ; the past, the present, and the future are one to them ; they have no to-morrow. They cannot pray, for prayer to them is without an object. The earth's spontaneous productions impart a solace to its animals, but are ungrateful to man, because reason has placed him under another government, and made the sweat of the brow the terms on which the boon is conferred. Conscious of his dependence, he supplicates protection, as one cast out from the care of his Maker ; thus sustaining a rebuke and degradation unknown to animals, but which fixes on his condition and destiny a distinction of vast import, and renders the possession of reason inadmissible to animals, because unnecessary.

A third class of definitions connect the rational and irrational sentient beings more closely than is admitted by Locke. At the head of this class is Smellie, who contends that reason is the perfection of instinct, and derived from it, and that man is distinguished from the brute not in principle but in degree. This hypothesis rests on the commonly-received opinion of a gradation in creation : a chain is supposed to run through nature, connecting by links which lay hold of

each other, are the intermediate steps between substances which differ in their qualities. Instinct, on this hypothesis, at one point embraces and becomes a low degree of reason ; in the other it sinks into and is lost in the appetites and passions—an assumption unsupported by facts—dissimilar principles cannot correspond, mind cannot partake of the properties of matter ; no genus or even species glides imperceptibly into another. The highest order of vegetables is an oak or a cedar—the lowest of animals a worm or a polypus—and does a common character unite and give them a relation ? Is a tree but another form of an insect ? and yet, if there be a gradation running through the works of nature, this must be the case. To a careful observer, nature has no points of an equivocal character. No specimen is found in any cabinet of a mineral in a state of transmutation, passing from iron to gold, or rising into vegetable organization : a distinction in principle is maintained by a distinction in operation. A chain, connecting two parts, supposes that one principle embraces both, and that the clod of the valley, and the plant it nourishes, are the same in their essential characters : thus the principle of life is at some point obscured, and lost in inert matter—a supposition contrary to the whole analogy of nature. Neither is there any substance partly animal and partly vegetable. Nature abhors that which is imperfect, but a chain of gradation gives to every link this character. Nothing, on this hypothesis, is complete ; nothing perfect ; but every part admits of improvement, and thus Omnipotence is libelled by his creatures.

Quitting the subject of gradation, as affording no aid in ascertaining the relation instinct bears to reason, we appeal to the disciples of Mr. Smellie for a defence of his hypothesis.

Not being able to discover any well-defined or acknowledged definition, we ask what is Instinct? Is it a form or a substance? a faculty or an attribute? The answer is obvious. These are all subject to decay, and change, and vacillation, being derived from causes foreign to themselves, and therefore cannot constitute instinct—cannot be, like it, a power ever perfect and complete. Distinguished from reason, by its being a limited faculty or endowment, it is also distinguished by its universality in operation, pervading all animated nature, and being, at its commencement, perfect and irresistible. Reason rests on its acquired strength; instinct on the arm of Omnipotence, whose power it represents. Reason must be cultivated; instinct cannot be, because, as I hope to prove, its power is defined and invariable.

OF INSTINCT IN MAN.

Before proceeding further, it may be desirable to inquire how far Man is the subject of instinct? Whether the beating of the heart, and the heaving of the lungs, be the acts of instinct, or the consequence of life, admits of a longer discussion than can here be given. If life be passive, inhabiting a body without in any way directing its operations, then instinct has the entire government. That life exists in an egg and in a plant without sensibility, and where, consequently, it is quiescent, is favourable to this supposition: that the action of the air upon the infant excites the first motion of the lungs and the heart, and rouses life from its slumber, is also a fact of the same character, but it is unimportant to the present question. It may also admit of controversy, whether life be the same in all organised bodies; in other words, whether one form of life be proper to animals and another to vegetables: however this may be, life is dependent on an organised body; destroy the organization and life is separated, without leaving any evidence that it was designed for a separate existence. It may, like the laws of nature, be every where present, but only operating when united to a material body, and, on passing from it, resume its former state, uninjured and *unalloyed*.

But whatever life may be in itself, instinct is inseparable from it. At the birth of a child reason has not been exercised, but instinct attended its formation and guides all its actions. The mouth opens to receive food and the eyes to gaze upon the light, at its command ; the other organs obey the same impulse, and thus the wants of a child in health are expressed and provided for by the same power. But sickness and death must have formed no part of the original constitution of man ; as they are unknown to instinct, which can neither relieve the one nor prevent or impose the other. A child delights in and discriminates the aliment suitable to sustain it in health, but rejects with disgust the dictates of reason and experience for its restoration from disease. Why does instinct forsake the child when its aid is most needed ? if sickness were natural to our economy, and not the effect of circumstances of man's creating. One thing at least is apparent, instinct receives aid from reason, and, consequently, has a separate office ; while instinct directs the appetites and passions, and whatever has a physical origin, acting towards them as the main-spring of a machine ; reason acts from circumstances, and on the machine being impaired, instinct abandons it and resigns its charge, regardless of consequences.

Why instinct has not embraced the state of sickness equally with that of health, and suggested the remedy with the same fitness that it suggests the food, is beyond our research ; it, however, teaches that instinct is limited in its office. But admitting that the power of instinct is greatly inferior to that of reason, it is the most active and most influential in forming the

character of man ; his strongest features are those which instinct imposes ; the passions, more than reason, sway our race. Because man is rational, he believes that he acts by its laws, and deceives himself. Reason, when it puts forth its strength, may controul, but can never subdue instinct—it is present in all he does. Reason cannot teach him when to eat, of what, or when to sleep, or how long. Reason cannot excite a passion, or scarcely mitigate its rage. The strong features of our character are drawn by instinct—have we a leading passion or propensity, it is instinct—reason is apart from either. All that belongs to our physical nature instinct calls into exercise and impresses with its character—if we deny its influence, we are ignorant of its power.

Instinct has a legitimate rule over the passions and appetites ; they bow to its sceptre ; but the dominion is limited ; to ascertain its extent, it is only necessary to inquire how far the senses, and how far reason governs man. To reason the senses yield an unwilling and imperfect obedience, but to instinct they unfold the disposition and determine the aspect of the character ; and thus they form the basis of the social compact, and are the source of our ordinary pleasures. But the agents employed by instinct, in directing its influence over sentient beings, give the most correct knowledge of its power. The passions, it has been stated, submit to its authority. Of this man affords a full illustration, but reason may counteract its influence ; and therefore animals are selected, as an evidence of the power of instinct, acting by the senses.

Some animals are sincere and faithful, and others

treacherous and cruel : and are not these dispositions directed by instinct, for the purposes of their economy, and to meet the circumstances to which their lives are exposed ? Others forgive or are revengeful, they love and hate, are benevolent or spiteful ; they apprise each other of danger and direct the way of escape ; they make known the danger and the advantages of the situation, and yet are selfish ; they organise as a community and submit to government ; they compare, determine, and select—a swan takes its wounded cygnet on its back and bears it in safety—the lion defends his lair as a possession, and an elephant resents an insult as one jealous of his reputation. Such are the agents by which instinct acts on sentient beings, and such the perspective through which man may view his character. By these endowments animals approach and imitate man, and when to these endowments memory is added, the imitation may, in many instances, resemble the original. Instinct, if it cannot think, can represent thought. The animal part of man originates nothing, but it imitates whatever the senses apprehend. The Creator has assigned to instinct the execution of the plans by which he governs. Trace animal life through all its stages, from the hour when a chicken, with the skill of instinct, breaks its shell, to that when, stricken with death, it separates from the flock and hides itself, that its humiliation may not be witnessed : and can existence be conducted with more consummate wisdom than is here done by instinct ?

Similar to this is the physical government of man—his understanding is not his dependence, but he is

of nature, and has itself the characteristics of a law ; for no other power is adequate to its office ; the power it bears sheds its influence not over the soil but over its productions. To this the other laws of nature are tributary. They go before and prepare the way ; by them the atmosphere is made fit for respiration, and the earth for seed ; but they cannot make barrenness fruitful, or clothe the bosom of the earth with verdure and animate its clay. A second creation took place, connected with the first, and dependent upon it, and the same general laws bind them together. When special laws are necessary, they have been given.

Thus organic nature needs a kingdom proper to itself, and requires laws appropriate to its circumstances. The grass has sprung up, but what influence connects it with the cattle whose life it is destined to maintain, no law of matter teaches its use. By not one of them have the ox been taught to eat the green herb or the tiger to devour the tender lamb, as the means of their subsistence. Here a question may arise, as reason, which is but a faculty, is the guide of man, may not animals be guided in a like manner ? A faculty of what ? Is there a principle in nature, independent of its laws, from which instinct issues, as reason does from the mind ? Certainly, no such principle is known. But admitting that it does exist, the subject is not embarrassed, for a faculty has no direct and immediate governing power—it is itself dependent, and has but an imperfect influence. Infancy and age are alike inimical to its power, and through life, from various causes, it is of uncertain energy. The body, on which

it depends, requires repose and sleep and a withdrawing from influences—such a power cannot resemble instinct—cannot be the guardian of life, which is in so many ways assailed, and must be ever watched over.

Instinct is never weary, and can it be imagined that any dependent or secondary power can be competent to its office? The power that guards the crystal, as it moulds and forms each particle to the same, shape and fixes it so as to correspond with other particles, and produce a whole of a certain figure, surprising by the superintending wisdom it requires, and respecting which all are ready to exclaim, “How can this be?” Almighty power, acting in the most direct manner, alone can accomplish it. One crystal is hexagon, another octagon, a third is rhomboid; but each is distinct, and no human art can produce confusion. The nucleus, however it may have been formed, only gathers to it crystals of the same form and quality; and do we so much admire the wisdom that by a law models unresisting matter? and do we account as nothing the growth of organic forms? If a law fashions a crystal, a law also upholds a plant. Life dependent on a contingent power must perish. To assign laws for the protection of matter, and not of life, is to give order and symmetry to the base, and withhold it from the superstructure.

It has been stated that laws, whose end is consummated in the adhesion and motion of matter, cannot instruct the swallow when to migrate, or the hawthorn when to blossom, and yet this cannot be accidental; a power, emanating from the creator, and not a secondary influence, can alone accomplish this. If it be instinct, can it be less than a law? and that this is

the power by which it is accomplished may be learned from the fact, that organic life is not protected by the laws of nature; not protected, no; to a superficial observer they appear as if designed for its destruction. The elements pour upon it their fury, which it cannot withstand; and the seasons, as they return in their course, wither by heat or destroy by cold; and from the least to the greatest, one organised body, of necessity, lives upon and destroys another. The earth affords them no repast, not even a manure to improve the soil. Lime and marl, which are used as such, once had life, or contain the wreck of living substances. All nature is sustained by the power that formed it; but that which sustains organic life is most direct and special, it rests immediately on the strength of the arm of the Almighty, who is not more mindful of the earth than of the beings for whom it was made: brute matter needs the united force of many laws, those of organic matter unite in one. The swallow is as irresponsible as a block of marble, for to whom does it give an account of what it does? Warned by an irresistible impulse it departs, and by the same impulse returns, with a regularity unknown even to the seasons: they vary, but the swallow re-appears on the same day in every succeeding spring. The power, be it a law, or be it not, is uniform, like that which rolls the earth along its path. A Law of Nature is Omnipotent Power, ordained to a given purpose, of which gravitation holds a prominent place, but it acts on matter, which offers no resistance but its inertia.

Admitting instinct to be a law, its sphere of influence is matter, diversified by a thousand forms and conditions, each complete in itself, and forming a

radii, tending to a common centre for a common purpose. Birds, beasts, and fishes submit, and are of the number of its subjects, each individual has its own interest to maintain ; but the power that gave them life ordained that they should be the means of subsistence to each other, and that this ordinance of death should be the means of increasing the sum of their happiness, for a greater number of sentient beings may, by this means, exist at one time than by any other. Old age, which to animals is a season of misery, is thus prevented, and an increase of the young who, among animals, alone seem capable of enjoying life, is promoted, so that no act of unkindness is done to any ; and the power of Omnipotence is greatly more conspicuous, in over-ruling and directing so many opposite interests, so as to maintain order and an equal proportion of each species, than by directing inorganic matter.

Hitherto, in treating of the power exercised on organic matter, man has not been expressly named, but instinct in him, as in animals, embraces every physical want—it surrounds his path and watches his goings—every disposition proper to animals is proper also to him. Some laws are more conspicuous in their observance by him, others by animals. The love of property is an instinct almost limited to man. The child claims its toy, and the savage goes to war to gain territory he can never occupy, and which can render him no actual good. Marriage is an instinct common to every nation, and to such animals as require the aid of the male in obtaining food for the young. Instinct is more powerful in rude than in civilized nations—

the quickness of the Indian is sometimes contrasted with the slowness of apprehension of civilized man. Reason by rendering a quick instructive apprehension less necessary to the European than the Indian, causes it to be less cultivated; but the temper of man, his habits, and pursuits, receive their character from instinct.

This powerful influence embraces the interests and guards the life of all organic matter, and unites the welfare of the whole in one. Destroy the leaf, and the fruit falls useless to the ground. Should the herbage wither, the cattle perish; or should a race of insects be exterminated, all that depend upon them for subsistence share their fate, and then again another tribe dependent on them, and still the dependence continues; so that, from the monad to the highest order of animals, there is a series of dependencies, which unites them all under one system of government, and gives to each the same elementary principle. Those that subsist on each other must have much in common, and this is true in all organic matter, from the least to the greatest. Digestion does not destroy the nature of the food; it only changes the relation its parts bear to each other, and substitutes others. Grass contains the elements of flesh, and by the process of digestion becomes such.

Here we catch a glimpse of the operations of instinct. Some recent discoveries show that all organised matter contains myriads of monads, or living atoms, so inconceivably small as scarcely to be detected by the most powerful microscope: even in decomposed animal and vegetable matter, where they are

most apparent, it is not very difficult to discover the design of their Creation. It has not yet been ascertained, but analogy justifies the belief, that the monads are divided into genera and species, and that each species has a specific property or quality, which fits it for the subsistence of a particular class of animals or vegetables. Chemical analysis does not detect any difference in the muscles or fat of animals, they to this test yield the same result—but it does not destroy the belief, that monads, of which they are in so great a measure constituted, vary in the species in each organic body. The colour and flavour of the flesh of poultry, which live on the same food, cannot confound the genus of those brought up together—a chicken cannot be mistaken for a goose. What, then, can constitute the difference which exists, but that they select from the food qualities adapted to their respective natures?

Every inquisitive mind must have asked, whence has the earth received the mould which covers it? Certainly not from the decomposition of its sterile surface, for the sun and the atmosphere have no other power over it than to comminute and break it into dust—they do not impart fertility, or contribute to the elements of organic matter. The substance of vegetables is not formed of that which has a mineral organ, for no mineral is food for plants; a more probable source of its formation is the atmosphere, as it contains carbonic gas, which forms the basis of charcoal, but no plant will live, however salubrious the air, if its roots be planted in pure earth and moistened with distilled water; so that the source of vegetable

growth cannot be the atmosphere, nor will it be fully known whence it arises, until it be ascertained by what means the soil is produced, and from whence it originated. As it is not an original formation, and cannot by any process to which earth can be subjected be obtained, it must be concluded to be an artificial production. Chemistry has ascertained it to be from vegetable and animal remains, but the difficulty attending it is not yet removed.

At the commencement of time there were but few of the human race, and but few animals, and probably but a scanty distribution of vegetable life, how can they have increased so as to form the existing multitude of every species, and to give a thick covering to the earth? We have said that earth, as originally constituted, forms scarcely any part of an organised body, it consequently is not the source whence soil was formed—every tree and every animal is a concentrated congeries of organic matter, but from whence was it obtained? if it be answered from the soil, the question again recurs, how was it accumulated?

Foiled in our researches, we turn to the brilliant discoveries of science in the present day; by them it is ascertained that water, and almost every other fluid, abounds with monads, or living organic atoms, equal in amount to one-half the fluid in which they exist, and are divided into genera and species, and have all the characters of animated beings, darting repeatedly from place to place. Professor Ehrenberg states their size to be about the 28,000 part of an inch, and their number in a drop of water to be innumerable. Monads, in common with other organic bodies, have

the power of increase—how they subsist is another question—but the same doubt applies to the herring and the toad when buried in the earth—the fact of their existence is all that concerns us. If monads generate, and there cannot be a doubt on the subject, all difficulty respecting their increase is at an end. Animals or vegetables cannot re-produce more than they consume, and, therefore, they add nothing to the elements of organic matter—they change its form, but not its quality—these elements pass from one to another, yet the amount is the same.

But if the deathless monads, for such they seem to be, multiply their species, and if their means of subsistence be out of the ordinary way, so that they live without consuming other organic matter, all difficulty ceases as to the formation of mould, for by their multiplying, probably with every change of state, from animal to vegetable, the falling leaf is made an addition to the world. That monads enter into, and, in a great measure, constitute organic matter, may be ascertained by infusing animal or vegetable substances in distilled water, which at once is occupied by them, evidently derived from the infused body. They differ in form and size from those common to water, but in the substance infused they may have changed their state, as other insects are known to do ; and as it is evident that they constitute vegetable before they can constitute animal matter, it may be readily supposed that they do not, in all states, retain the same figure—grass may sustain them in one form and muscle in another.

The Chemist is unable to detect a difference in the decomposition of the muscle of different animals, or

the wood of different trees—to him the result is the same—but animals living on the same food as poultry, in a farm-yard, differ in the colour and flavour of their flesh, doubtless they were originally constituted with the difference which now exists, but how has that difference been maintained? either the same elements are differently combined in digestion, or from the same food a variety of elements are obtained, part of which are suited to one animal and not to another, in either case it is not difficult to suppose that the species of monad determines the digestion of the animal. The farmer does not always sow wheat, or his field would, in a few years, scarcely reproduce the seed. The food proper to this grain other crops have consumed, but rank weeds still find food suited to them in great abundance; be it a species of monad, or some quality of the soil friendly to their production, the fact that the same food does not suit all plants is evident, and if the stalk of the grain and of the weed be infused in water, it will be equally established, that the growth of the plant adds to the number of living organic atoms. There cannot be a tree unless there first be the elements of which it consists.

Land is manured in anticipation of the crop. The Gardener expects, in some way or other, that what he supplies will promote vegetable growth, and should he discover that, contrary to all analogy, a plant weighs more than the seed and the food it had consumed, he would probably attribute it to some occult cause; but if he be a man of observation, he will have seen that the soil round some trees increases in depth,

that of the Spruce Fir especially, whose addition within the limit of its branches is an inch in depth in about ten years, by the falling of the leaves. Heath also on the mountain top increases from the same cause and from the yearly decay of part of its roots; and hence he will demand a more rational explanation of this undoubted but unexpected fact, and will conclude that, in some mysterious way, vegetable growth occasions an increase of soil; but he has yet to learn that in the food of plants there are myriads of deathless monads; I say deathless, because if they died at the rate of one-hundredth part in a year water must become putrid, and if in a less number, gas, indicative of the fact, would arise and escape and discover the circumstance. As these monads enter the plant with the sap, and have, in themselves, a principle of increase, which the plant may foster, a conclusion may be drawn as to the accumulation of soil, and thus a ray of light breaks in upon a subject that was before inexplicable, and gives the cheering assurance that as the world peoples it fertilizes. Was there no increase, were the rudiments of organic bodies no more than at the creation, to advance their numbers must diminish their size. But, in the view now opened, the earth admits of a prodigious increase of inhabitants, with ample means of subsistence; for, if every genus of plants or animals has its own appropriate food, the whole mass of beings must advance together, each assisting the other, so that the existence of one secures that of another; for as they live on each other the number of each genus depends on the supply of food the first receives. With an increase of mould

there is an increase of all the earth's productions (beginning with the grasses;) no field in science opens a prospect so brilliant or so beneficial as this which Professor Ehrenberg, and other Philosophers, have opened to our contemplation. In it new and vast discoveries in the sciences, in the atmosphere, in the knowledge of disease, and in agriculture and the arts, invite attention with assured success. They also open, in natural history, a subject of the highest importance, that of Spontaneous generation. It is an established fact, that most animals are annoyed by, and sometimes become the victims of, Parasites, which infest the skin and the intestines, and are proper to the animals on whom they are found, and exist no where besides. Those that infest man are not found in beasts. The worms of every animal may rank under one genus, but the species differ: some of them multiply according to the ordinary course of nature, but how they obtained their first lodgment in the body is difficult of solution,—others are never found in a state of growth, but always of a full size, and are not known to propagate; some exist in the bladder, others in the liver, some make their way from below the skin—Dr. Heberden witnessed such a case. Besides animals, vegetables are subject to a like spontaneous exhibition of life—some of the fungus tribe appear in the decay of wood, in a way inexplicable, but on the principle of their having previously existed in the tree, and that disease had given rise to an assemblage of living atoms, so as to constitute a given form; and it may not be impossible that disease in animals may have given rise to assemblages

of monads, which acquire a certain form and detach themselves from the system, as that there are excrescences which remain attached ; but this subject cannot be pursued further, it belongs to the Naturalist, and will demand his attention.

The question that most concerns us is the government of this new World of Beings. The water that flows at our feet—the mould we tread beneath them—every leaf that waves in the air, and every animal it sustains—all we eat and all we drink—are but various congeries of animated atoms. This being the fact with fixed and tangible substances, what is it with the atmosphere, which is constantly bearing away from putrifying matter myriads of these invisible living atoms? for it does not appear that decomposition is their death—the tissue which holds them together alone perishes and assumes new forms. It may have been supposed that organic growth differs but little in its principle from the formation of crystals, and that therefore the law of affinity is applicable to both. The law of affinity can never be withdrawn, while matter exists, it exists with it—but life, and with it instinct, may be taken away from organic matter and its elements be dispersed, affinity had not united them and now has no influence in their separation.

The law of affinity, which forms the beautiful variety of minerals, is resisted by the living principle : an animal that exercises itself by voluntary motion, does it in defiance of the laws of inorganic matter—they have power only on the dead, life has a law of its own. No law hitherto admitted can cause a vegetable to grow, or pile up the immense myriads of living

atoms that constitutes organic matter. The laws Newton saw, and with which his gigantic mind measured the heavens and comprehended its vast machinery, scarcely claim as subjects of their power the crawling insect or the buzzing fly; but another law, one Newton did not bend his mighty mind to contemplate, claims them and exercises independent power. Is the motion of the planets round a common centre more an act of might, or the influence they maintain more an act of wisdom, than the succession of life we have claimed for the uniform, the constant, the homogeneous concourse of living beings, varied by ten thousand times ten thousand forms, devouring each other, and yet living as a body connected by one common interest? We have claimed for this master-piece of creation the Creator's care—for it he formed the world and for it he upholds it? How? Having said let there be light, and there was light. He withdrew, but his wisdom and his goodness are represented by his laws—here we see and know him. But what would be their beauty if unseen by man? if the earth rolled round, absorbing the energies of its laws to aid another influence—they cannot turn aside their power.—Gravitation aids no other law—the operation of each is specific—which of them assists the bird in its flight, or the mole in burrowing in the earth? Does affinity? Does centrifugal force? Is it not another law, one mightier and more magnificent in its power than all the laws that move the universe?—they come to no pause and undergo no change—one continued *influence* bears them on in an undeviating course—but

life ceases and is renewed, another body rises up, like that which, faded and broken, had passed away, and where is the law? Instinct is one with life. That is the law. Gravitation is one with matter, that is their law. Change them—mix them—separate them—that is impossible; every atom in existence is immersed in them, and cannot be wrested away. Reason may be withdrawn, it is not a law; but instinct cannot be. The Idiot eats and drinks, and does whatever is essential to life, he is not guided by reason, for he never felt its power: but he is not forsaken, and cannot be so, for the law of life is instinct; he lives by its guardian care, and before his pulse had beaten, it was with him and they will cease together.

We have assumed that instinct is a law in the sense that gravitation is a law, and we advance to the comparison of their claims. A Law represents the Wisdom and Power of the Lawgiver, and is founded on first or essential principles which are declarative of his will; and this is no where more forcibly illustrated than in the position in which gravitation has placed our planet, except in the protection of its productions. The wisdom that maintains the earth in its position defends its increase. There is wisdom in combining the means with the end, and there is power in enforcing them. It is also of the nature of a law to act immediately and without any thing interposing between it, and the object on which it acts—thus gravitation acts on matter, thus also mind acts on matter, and instinct on whatever has life—power that is inherent is essential, and necessarily governs all beneath its influence, such is the power of instinct over

organised matter. Universality of influence, and independence of action are also essential to a law and are fully exemplified in instinct ; nothing can escape their power, nor can they by any means be arrested or embarrassed. It would be an anomaly in nature if one form of matter received the protection of laws, and another not, if day and night recurred because of their power, and light and darkness were given without an object—that they alternated each other, but were ordained to no office. It is not enough for our purpose that they are essential to animal and vegetable life, the fact that it is so is established, but the difficulty is in the way in which it is effected—how is light and darkness beneficial, is it not by the operation of instinct ? and here we find an argument in favour of its being a law ; for, if light and darkness are its agents, an estimate may be formed of its power, but the use of the law conveys no distinct idea of its nature, or the mode of its operations. Did instinct exist at the creation, when the varied forms of life sprang into being, clothed with strength, and in size and disposition, and in the capacity of the senses perfect ; when their relation to each other was also arranged, and the mode of their existence determined ? Did instinct then exist, or did the arm of Omnipotence bear up and sustain its creatures ? Instinct could not exist till that arm was withdrawn, that it might appear as its representative. Instinct does not form and design, but it maintains and directs in the execution. The eagle was fitted by its disposition and structure, to devour its prey, but instinct awakens the disposition *and directs* the means. Instinct, therefore, cannot be

said actually to have existed till it received its commission to act, and then, by a mysterious and inscrutable power, it secures the existence of every living atom.

Another question arises as to the necessity instinct has for the use of the senses, and how far it is dependent upon them? In the general economy of life, when possessed, they are not employed, and only on particular occasions and for partial purposes are they required. Motion needs their use for its guidance and direction, but the organs essential to life are independent of them. Animals who possess the senses have them not in equal measure. The fish scarcely hears and the bird scarcely tastes; but did the senses correspond to instinct, so as to be ever present with it, they must, like it, be uniform in their principle and invariable in their strength. Instinct is not less because the structure is imperfect—it is as strong in the callow bird as in the full-fledged eagle. Age lessens the senses, but it does not impair instinct. As a law, it exercises its power equally, under all the circumstances and forms of organised matter—the imbecility of infancy, or the decrepitude of age, have its respective care. The fish, formed for swimming, and the bird for flight, are stimulated by instinct to exercise their organs for the purpose for which they were given. Their senses are conformed to their circumstances. Neither could change with the others. The sensations of a fish or a bird are conformed to its circumstances and limited to them; and that which is restricted and bound down to a certain organization looses the character of a law.

Thus far no definite knowledge is obtained of instinct when it received its commission, and its power Creation had terminated. The senses, which seem to claim an essential, if not an equal influence, were discovered to be not auxiliaries but servants. Under this view the subject is reduced to a point. Organic life was created as we now find it, and subjected to government; the senses and faculties, and whatever is included in creation, is not the power that governs—nothing in nature governs itself—reduced to this narrow limit, to this contracted sphere of influence, it may be asked, in what does the power of instinct consist? We answer—In upholding organic matter in the functions, by which the waste of the system is restored—In continuing the species distinct and unimpaired, and in exercising an irresistible influence for the preservation of life. In accomplishing which, instinct acts on organic matter as other laws are admitted to act on inorganic—that is, by a power imparted to them by which certain ends are accomplished; the means, the distinguishing difference between the laws, is not in the principle but in the subject. Instinct acts on matter as other laws act, and gives it qualities and properties. Grass, eaten by a cow, is in part converted into chyle, then into milk, then into blood, and from it the whole system is supplied and fed—the atoms which formed the grass have undergone no change but that of arrangement. In passing from one state to another various influences operate upon them; the elements being decomposed are brought by digestion under a new influence, *and enter* into new and varied combinations for

the supply of the system ; at length death does its office, and decomposition breaks up all the combinations formed in the system : and all that existed in the state of bone or muscle, or whatever constitutes an animal body, now either floats in offensive vapour, or, mixing with the soil, is absorbed by the vegetable roots, and becoming sap is soon again in a state to sustain animal life, and to re-commence the process and the changes it had so recently passed through.

Instinct is generally so confounded with sensation as to make it difficult to withdraw the mind from the association. If a cat is seen suckling its young, the affection evinced is deemed an evidence of the strength of instinct—but affection is not instinct. Suppose a polypus to be substituted for the cat, instinct still maintains its rights and does its office ; the young are nurtured but nature has denied a nervous system, and consequently sensibility is withheld from them : the old and the young have no knowledge of each other, and yet their reciprocal obligations are discharged. Instinct is evidently apart from sensibility,—the operations of instinct would become evident to the senses if expression could be given, but it is unnecessary to confine our observations to animals, vegetables are to an equal extent its subjects. Has not a tree as strong an instructive propensity for water as an ox ? and does it not drink it up with as great facility ? Instinct is as independent of sensation as gravitation is of colour—its influence is not directed by qualities and properties, but by the principle of existence. Its government is over all faculties, which it subdues, and over the whole organic mass, which it superintends. Instinct comprehends *the wants of animals and vegetables.*

If the labour of the day causes weariness, so that rest and sleep are become necessary, it at the same time occasions a waste of the substance of the body, which requires to be replaced, and how can this be accomplished? the bone has not power to call to its aid the elements of its own nature from the entire mass of organic matter—neither has the muscles, or the nerves, or the brain, or the vegetable fibre—exhaustion cannot recruit from itself; the weary individual lessened in stature by labour, cannot rise from his bed increased in height, as he finds himself to be, by the acting of the enfeebled parts on themselves: but instinct stretches forth its power, and in the season of rest restores the waste and relieves the weariness.

To recruit the physical organs is to restore the vigour of their functions and the acuteness of their senses—all that is dependent on physical causes is obedient to physical laws. The disposition and form of a cat fits it for aggression, not for courteousness, and in the wild state, instinct so employs them: but, in a state of domestication the dispositions are not needed or employed, and thus physical influence forms the character, and not instinct.

Unless instinct be independent of the disposition and character and physical power, it can have no governing, no specified and determined force—it cannot be a law. As we go on we will endeavour to prove, that whatever has a physical origin is subservient to instinct. Neither the sagacity, the temper, nor any other part of the character of an animal is derived from instinct. Sagacity is the fruit of *experience*. The temper that of circumstances, or it is *physical*. All that in which an animal excels, or

even is deficient, is influenced by its extraction or its bringing up. Instinct uses all that an animal acquires or is possessed of, to its advantage—if it knows where to obtain the means of subsistence, instinct does not put it on expedients, it does not send it to hunt—if the want be supplied its influence ceases. Instinct has no jurisdiction—it neither rewards nor punishes, it neither increases nor diminishes the capacity. It does not need the aid of sensibility to insure the security of the species. It is itself a law, exercising its power on whatever has a physical origin or dependence. Its seat is in the atom, not in its endowments—in that which perpetuates, not in that which is subject to change—in that which is essential, not in that which is ornamental—it is in the organic substance, not in its sensations. Instinct cannot be taught, but whatever is dependent on sensation may be.

If instinct be a law, it operates on matter as alone admitting of such an influence. The passions and appetites—the heart—the brain, the source and centre of sensibility, cannot be subject to a law, or man is a machine more humbled than the dust he treads upon. Man's feelings originating in a law, give to reason no authority, to virtue no value. Man cannot be responsible, if his passions are not free—he cannot be physically under the protection of his Maker, if his person be not subject to His laws—and has organic matter no law?

THE SUBJECT CONTINUED.

In the preceding chapter, instinct was placed among the Laws of Nature, the principle or by which alone its right to the high office can be maintained, that of directly and specifically acting on matter, so as to insure a given result ; but, as the subject requires to be placed in various lights, so as to obtain a just view of its extent, a few additional remarks are added. No illustration is ever given of instinct, but such as connects it with animal life. What an animal does is alone esteemed to be instinct, but so indefinite is the term, that little more is understood by it than that some occult influence dependent on sensation is in operation : indeed, sensation is supposed to be so bound up with instinct, as to be inseparable. But what is the power of sensation ?—it either originates its own actions, or it is an agent—it directs or is directed. If it directs, instinct is its servant, and its name and influence must cease together. But if instinct directs sensation, and employs it in the execution of its office, then sensation ranks no higher than another agent. A tree, in putting forth its leaves, is as much governed by instinct as the animal that devours them—sensation is not necessary where motion is not required—even the functions of the animal economy are conducted with as little sensation as the

vegetable, which points out sensation as applicable only in certain circumstances. The heart beats, the lungs inhale, the brain sends forth its energy, and all the glands perform their office unperceived—when locomotion is required, there alone sensation is necessary—when this power has been withheld, sensation has not been given, as in the Tuberpores, the Madrapors, the Sponges, and some species of Worms. The Bat and the Frog, in the summer, are full of energy and feeling, but as the year declines, they lose their vigour and hide themselves—to a casual observer instinct has forsaken them ; but it maintains its office and watches over their state of insensibility in which act they as much obey instinct as when seeking the means of subsistence. Was not sensibility withdrawn when the power to move ceased, life would be to them the highest form of cruelty. To be conscious of the approach of danger, to see it draw near only to await its stroke, would not harmonise with the kindness of the Creator ; and, therefore, when motion is withdrawn, sensibility is withheld, but the functions of life go on, the power that watches over them does not slumber. This power is, therefore, independent of sensation, a power that operates not on the consequences but on the principles of existence—not on motion—not on sensation—but on that which makes both necessary.

Besides sensation, instinct is illustrated by the fear animals appear to have of death. The many expedients and devices they employ to protect and preserve themselves in life—their cunning and their caution—are all, by common consent, ascribed to instinct. 11

an instance of instinct be demanded in their actions, it is sought for. The animal that has extricated itself from a snare avoids it afterwards. Was instinct that which it is generally believed to be, the trap would have been detected, experience of its power taught its character and it can be learned in no other way, which gives a new aspect to the character of animal fear, and divests it of its influence as a passion and merges it in instinct. Fear, as a passion, produces indecision; but a jeopardised animal is never confused, never mistaken, its effort to escape is maintained with unabated vigour and undiminished skill till death determines the contest.

As animals are not ordained to die a natural death, the fact of their mortality is concealed from them, and thus the fear they feel is distinct in its principle from that which is felt by man. Conscious of his immortality, he shrinks from death rather than from suffering. Animals shrink from suffering—a mouse in the paws of a cat excites commiseration, and the benevolence of the Creator is even impeached; but the amount of present suffering is counterbalanced by the chance of escape, and as no evil is anticipated beyond what is endured, the animal is fully occupied in watching the moment when it can extricate itself. Was fear with it a passion, like that which man feels, the mouse would be in a most pitiable condition—but the fear of death in animals ought rather to be called their love of life, and this is an instinct: and if that foreboding of an hereafter, which the savage and the civilised man alike possess, be removed, fear is without sorrow and becomes an instinct; remove the appre-

hension of death, and let the evil which awaits us be concentrated in the present moment and what is its amount? the effort to overcome beguiles the suffering—in this state instinct places animals, so that the way by which fear operates is an evidence that it is with them an expression of a law.

Instinct is always varying in its connection with the senses and the passions, which is another source of the wrong apprehension formed of it. Experience is reputed to be instinct. A Dog does not obey its master instinctively neither does a Camel, when it kneels to receive its load to bear it through the desert—discipline has made them subservient. In a wild state animals have enemies, which they learn, not by instinct but by experience, to deceive or avoid, and they also learn to discriminate between their enemies and those that are not so : a Weasle alarms a Hare, but a herd of cattle are approached with confidence, every disposition connected with sensibility admits of being taught and improved. How much then has been attributed to instinct which has another origin.

Instinct is assisted by and has power over all physical agencies, which also admit of other influences, and by them also an aptness is acquired, which has been unfitly ascribed to instinct : when the consequence of experience and discipline are taken away instinct is shorn of much of its power, but its operations are marked by its inherent energy—it is still a law—and only when life is exterminated does the power of instinct cease.

It would be easy to enumerate instances in which the actions of animals, which bear even the semblance of reason, have been acquired by discipline, and others which are spontaneous and assume the character of a law ; but enough has been advanced to prepare the reader to contemplate instinct in those actions where it is most conspicuous and universal, and hence to attain a knowledge of its essential character. A Hen, having laid its eggs, is irresistibly disposed to continue sitting upon them for a certain number of days, at their termination this disposition entirely ceases and she cannot be induced to remain. If the eggs are unproductive she leaves them ; if chickens have been the result, a disposition, active, energetic, and careful has arisen, and superseded that which induced the incubation of the eggs. The vigilance and devotedness of the Hen, and the entire confidence of the chickens, their knowledge of the directions, and their implicit obedience till they are able to direct themselves, finely illustrate the power of this law. The Foal, rising on its legs and sucking its dam, is another instance—but examples are unnecessary, the life of every undomesticated animal is one continued state of instinctive influence, of which every action is an illustration. No one doubts that the laboured progress of a Salmon up a stream, many miles in length and so shallow as scarcely to afford it a covering, there to deposit its spawn and then to urge its course back again to the ocean, is a direct and unequivocal act of instinct—others need not be noticed.

The subject is now fully before the reader, and the

only difficulty that remains is in reconciling the theory with the facts, and thus to constitute instinct a law, operating like other laws on the substance, and not on the qualities or endowments of matter; a difficulty easily overcome. The laws of nature, acting on dead matter, exercise a mechanical force of irresistible energy—the needle is drawn to the loadstone, an alkali and an acid still more vehemently rush together; but living matter presents a rather different mode of operation—it is not one act but many—not one evolution but a series, depending on each other and forming a circle, corresponding with that of the year, which comes under the command of instinct. When Winter is passed, all nature under its control revives and prepares for the business of the year, and before winter again recurs it is completed. The domestic Hen early commences laying its eggs, no design or plan occupies its attention, nothing of the future is anticipated, but presently a new disposition arises and the hen continues with the eggs, sitting upon them till, at the given period, the chickens hatch, and here again new propensities are imparted, the brood requires and receives her utmost vigilance and care, which continues till they are able to protect themselves and then all sense of obligation ceases, and they become to each only as animals of the same species. Such is the nature of the government of instinct. Before the hen commenced laying its eggs, its health and animation appeared to increase, and the comb gave sure indication of the successive changes which were about to commence in its feelings and in its propensities, every change waiting a corresponding

state of the system to prepare for it, although not so manifest as that which the colour of the comb indicates; yet in the sitting hen the disposition is sometimes so strong that an empty nest or the bare ground excites her notice, and her legs seem instinctively to bend and for a time to constrain it to sit. That a change in the state of the system is effected, corresponding to that of the disposition, every observer of nature is familiar with. In order to connect it with instinct the cause must be ascertained. Power of some description gives motion to the ultimate atoms of the living structure, by which it acquires new capacities, and in the animal corresponding feelings arise, rapidly succeeding each other. How these are brought about and by what power is not evident. If instinct be excluded, the power, be it what it may, acts at different seasons, so as to give rise to those combinations of the constituents of the body and of those excitements of the organs, which in animals are called forth and are the seat of the disposition. The condition of the hen before laying her eggs, is an evidence that a preparatory state is necessary. What effected it, if instinct did not?—and what is the office of instinct, if this be not?

On this power the economy of life depends. The senses are but guides—they originate nothing—the hen, whose physical system was excited, had no power to controul the present or direct the future—the body changed, and with it its disposition—it is but a machine, of which its feelings and energies are but portions, the power that moved them did it through an organization which it controuls and manages. The

old and young of no animals have much in common, but instinct supplies their respective wants. Was it not measured by the state of the system, confusion must ensue, but as the state of the body determines the character of the feelings, the only question to determine is by what power the body is governed, because the power which set all in motion and directs all either is instinct, or supersedes it. Flax cannot be spun, nor wheat thrashed without a machine, but besides the machine there is the gin, and besides the gin the power that moves it. The machinery is the mere apparatus, and is applicable to that specific purpose only, but the moving power is applicable to all purposes, tending to the same description of result.

It is thus with the power which rouses into action organic matter, and carries it on with the assistance of such capacities as the machine presents; one part crawls, another swims, but their business is of the same character and has the same conductor. The feelings of animals were created for them to be called into exercise by instinct, which watches over and draws together the elements by which they are excited; and thus physical operations, under the direction of a law, ensures the result of their creation.

The power that acts upon a gland, or on any part, or the whole of the system, so as to create a specific action, assists in a mere organic body the result of that action. The power that excites in the comb of a hen a florid appearance, ensures, under ordinary circumstances, the forming of a nest: if the system predispose, there is no obstacle to the accomplishment of its object—the effect follows the cause. The want

of food in a healthy animal creates hunger ; the gastric juice acts on the stomach and the sensation of hunger is the result. Carry the remark to every feeling, and it will be found to originate in the change of state which has taken place in the living organ, consequently to the seat of the power by which the economy of organic life is conducted in the organic body. If food is not required instinct cannot create the desire. If to the continuation of the species the hen be unnecessary—it would not form a nest—carry the idea to every impulse, and its source will be found in the state of the body. This force then is instinct.

OF THE INSTINCT OF VEGETABLES.

A Seed blown from a tree falls peradventure among shrubs or on a tuft of coarse grass, where it sinks to the soil and is covered with dust and decayed leaves, or a worm in throwing up the soil covers it; here it remains protected like the egg by the principle of life, till a warmer atmosphere gives it energy. In due time the radical and plumula burst through the husk, the one invariably piercing deeper into the soil while the other as certainly breaks through, and presenting itself to the atmosphere, is invigorated by its influence. Reverse the position of the plant, let the roots meet the air and they die, the power that directs them downwards never errs under its guidance; the plant flourishes and advancing onwards at length arrives at maturity.

Plants, like animals, vary in their character and endowments; an esculant plant sends forth a tendril to grasp a prop capable of sustaining its weight, but never lays hold of a leaf or a stem, feeble like itself: a plant of a more woody fibre sends forth no tendrils, but stands erect, sustaining itself against the hurricane. Should some rude foot crush the tender plant, or some still ruder force divide it, life resists the stroke and is not extinguished; its residence is not in the branches but in the roots, these cannot flee from

danger but are protected in it: and when an injury has been inflicted, preparation is at once made for its reparation, by the forming and shooting forth of a bud, having all the qualities of the former plant. And is this without design and without an agent?—if the plant received its qualities from the Creator, he alone can perpetuate them; and as he governs the physical world only by his laws, the reader will inquire what is the character of that law which directs the senseless vegetable?

This inquiry will be assisted by noticing the resemblance in the general economy and physical order of the two kingdoms. The roots of a plant correspond in their functions, to the mouth of an animal, the leaves to the lungs, the stomach also has its counterpart in the plant; by a process, similar to that of digestion, the food obtained from the soil is converted into sap, and then, like the blood circulated through the system, supplying every part with appropriate nutriment. The bark and the fibre, and the leaves and the fruit, receive from this source an addition to their substance, bearing a strong resemblance in the process to that by which an animal is sustained from the blood. The vegetable system having assimilated to itself the various elements contained in the sap, ejects that which remains, as fæcal; this is either evaporated, or washed off from the leaves by the rain or dew, and falling on the herbage beneath, diseases, and ultimately destroys it. Trees of the fir tribe, so lofty and free from branches that the sun and air have free access to the roots, scarcely maintain within the circle of the branches a few sickly weeds; even

an oak planted singly on a hedge bank injures the adjacent shrubs : but the exudation of the leaves of all trees have not the same poisonous quality ; the grass in a grove of forest trees is rank, and rejected by the cattle, but the grass in an orchard, is fine in quality and pleasant to them in flavour.

Besides these there are other points of resemblance proper to notice. Night is to both kingdoms a period of repose, Winter one of inactivity, in which animals are either covered with a richer fur, or become torpid or migrate—in vegetables the sap descends, the vigor ceases, the leaves fall to the ground, and thus, like animals, they are prepared to pass uninjured through the season : neither the glair of an egg, nor blood, nor sap, lose their fluidity until life be extinct. The climate genial to an animal is genial to those vegetables best adapted to its support. The rein-deer bounds across the Arctic Circle, delighting in the mosses which spring up in those dreary regions ; while between the Tropics we find the elephant, basking in the rays of its fervid sun and regaling on vegetables adapted to its taste.

This is not accidental. If there be design in adapting the constitution of animals to the climate, there is in adapting that of vegetables, and their continued succession requires equal superintendence. Again—the migratory bird, warned by an unseen hand, departs : the leaf, forsaken by the sap and withered, is disengaged from the tree. In its season the bird returns, and then the tree renews its foliage, to give refuge to the insects it delights to feed upon. Another marked resemblance in the economy of the two kingdoms is

the existence of the sexes in the blossoms—thus should a plant produce but one sex there is no fruit.

From the preceding facts, the animal and vegetable economies are so connected, that it is difficult to imagine them governed by two influences; sensibility alone seems to distinguish them, and even this loses much of its force by the fact, that without a nervous system plants indicate its influence. An east wind shrivels the leaf and diseases the plant, an inappropriate soil, or insufficient food, destroys the luxuriance and mars the beauty of the vegetable structure. The Moving Plant, (*Hidysum Movens*) almost turns round on its foot-stalks by the influence of the sun's rays. The Mallow, and other plants, follow the course of the sun. The Tamarind Tree contracts its leaves to shield the young plants from the night atmosphere. In other plants the calyx, for a similar purpose, envelops the blossom. A plant, in a room which admits but a feeble light, directs its branches towards the aperture which gives it access. A plant, cut down in its growth, sends out another stem, and, as if conscious of its situation, hurries on every process, that the seed may be matured before the approach of winter renders it impossible. Variation in the temperature, the approach of night, the threatened tempest, warn the plant as they do the bee. Wheat sown in the autumn ripens with that sown at the commencement of the following year. The last portion of the year, though warm and grateful, have little influence in promoting vegetation; the gales of spring must first blow and impart vigour, then the construction of the foot-stalk, enveloping the rudimental ear, advances, and although

the mean temperature be not greater than in autumn yet progress towards the crop is made. From the germinating of the seed to the consummation of the crop, influences are required as various, as those the hen experiences in bringing up her chickens. Those of the spring strengthen the roots, and invigorate the blade, the summer's sun fructifies, and the autumn ripens, and they cannot be reversed; the warmth of May and of August may correspond, but the impression is unlike—it is not temperature so much as the quality of the air that influences. The late sown plant loses its symmetry and beauty by the speed with which one quality of the air succeeds another; the gales of August are indeed favourable to the growth of plants that blossom in winter, but the grasses grown long and lank want the nutriment the grass of spring possesses. Wheat, however managed, cannot be ripened in May; it is not the season, because the previous impulses have not been given. A hen cannot be induced to receive chickens to her care before having incubated the eggs. Nature harmonises all her works, and extends her laws to the utmost extent of the system they govern.

But we may advance further and remark, that the ear of wheat, or of other seed bearing plants, is guarded with all the care that is bestowed on the young of animals; not only is it for a long season preserved within the foot-stalk, but afterwards, when it waves in the wind and is seen from a distance, it is without attraction, no insect pierces it, but in safety it matures and repays the husbandman's care. In a country where a plant is indigenous, its protection is still more

strongly marked. Concealed for a season by the earth, when it appears above its surface some lowly bush it may be concealed and shelters it from observation, until the roots have obtained strength to repair any injury done to the stem. In due season blossoms are put forth, delightful in their fragrance, but to animals they are without attraction. The bee only is drawn towards them, but while it sips the honey it inflicts no wound. The fruit, when formed, is concealed by the leaves, or if, perchance, it be exposed its taste is ungrateful, and only when matured and about to convey to the soil the germ of future plants is it sought for as the means of subsistence, and then, the seed are by so many animals rejected as to ensure a succession of plants.

This mark of superintending care may capriciously be said to belong to some other cause than instinct. What other cause exists? Is not design manifested? If so, there is a power to carry it into force, and is there a power besides instinct? Vegetables are not degraded by their insensibility, or animals by being denied reason—both are complete without them, and, as a proof, they exist undiminished in number and incapable of change; for, as no law acts unless on matter, and as it is necessarily under a specific influence, producing certain capacities, so the confounding of the species is as impossible, as the confounding of crystalization—hence hybrids are unprolific. Their system is not so perfect that instinct can act upon it. Laws of nature being determined in their operations, do not admit of being so accommodated to circumstances. The elements of an organised body must be

in conformity to the influence of instinct, and instinct must be such as is proper to the species, or the operation of a law upon them will produce no definite result. A gardener, by cultivating a single blossomed flower, causes it to become double, but its power to propagate is destroyed—other seed must be sown and the same care bestowed. The Creator has guarded his productions by his laws, so that no new species can originate by the devise of man. Instinct creates the capacity by its power over organic matter. The subject does not admit of discussion, but the Philosopher will discover in what way instinct operates in the propagation of organised bodies, and by what provision each species is kept distinct.

EXAMPLES OF INSTINCT IN VEGETABLES.

Perhaps no phenomenon in nature is more remarkable than the means by which the roots of vegetables obtain sap from the soil—no magnetic power draws towards them the elements they are nourished by—no well-formed mouth prepares them for digestion, but a few fibrous roots, enveloped year after year, in the same soil, without change or alteration, draw from it the means of increasing the size of growing trees and of sustaining in vigour the wide-spread oak, that has witnessed a hundred summers and of clothing the whole with foliage which, in its decayed and dry state, is of considerable weight; by what means the roots attract elements of which the original soil must have long been exhausted, and accumulate from no other apparent source a monument to their skill as lofty and ponderous as the full-grown oak, has not sufficiently excited attention. The soil beneath an oak is not diminished by its growth, although the leaves have been swept from beneath its branches and the smooth grass-plat which it ornaments has been refused manure; the rain that, in its descent, washes from the leaves their exudations is the only possible source of increase, and can this form a tree?—some hidden source remains to be explored and calls for a new series of experiments. Water is evidently the

vehicle and probably, in part, the food of plants, but distilled water, if it sustains the life, does not increase the carbonaceous matter of a plant. The soil also that surrounds the roots requires the experimentalist's attention; if infused in distilled water and examined by a powerful microscope, some light may be given to the subject. *Animalculæ* may exist where earth only was expected to be found, for while some trees scarcely affect the sensible qualities of the soil, others change its texture—the lilacs more rapidly than any other shrub convert the clayey surface of some gardens into mould—it may be the case with other shrubs on other soils, whose roots are equally fibrous, but this has not fallen under my observation. From the paucity of our knowledge on the subject, we suppose the roots merely absorb the water, with such decomposed matter as it holds in solution, and hence the tree is fed; but how is it so suddenly converted into sap? Suckers shoot from the roots, with all the properties of the original stock, indicating that the aliment of the tree is at once formed, and that the change thus effected by the functions of the roots is similar in character to that effected by the stomach. No chemist from the materials can produce a similar result; a power, greater and wiser than his, from such materials sustains the vegetable covering of the globe, and such power exists in a law, and a law has the power of Omnipotence.

When the sap is formed, it is circulated through the vegetable by means no less difficult to comprehend than the circulation of the blood. Sir Humphry Davy, with many other philosophers, got over

this difficulty by ascribing it to capillary attraction, but the subject has not been fully considered by them. Capillary attraction is a single not a compound action; it raises a liquid a given height, but it is contrary to the principles of its nature to repel or to cause the fluid to flow out or rise over. Divide a capillary tube and the ascent ceases at the divided part, not a single drop is propelled beyond; but in the living tree the sap rises and descends by an unseen power, or flows from the wounded bark. No two principles are more distinct than capillary attraction, and the circulation of sap in a vegetable or blood in a animal. That incomprehensible power, which finds in a barren clod the elements of the loftiest trees, raises up the sap to the most distant leaf, but, at the approach of autumn, the capacity of the tree diminishes, by some change having taken place in its physical structure: the syphon cannot be the cause of its descent, it is a motion in one direction only, and therefore inapplicable; but the sap, like the blood, moves on through the system regardless of external influence, and exhibits a power of superior energy, for the blood, propelled by the heart, is assisted by the arteries, the valves in the veins interpose and prevent its return, and thus they aid its continued flow; but the tree effects its circulation in fibrous tubes, without a heart to commence the motion of the sap, or other obvious means to continue it. Was capillary attraction the cause it would at all seasons be in operation, for its principles being mechanical it cannot vary, but that which forces onward the sap is connected with the principle of life—whatever that power be its seat of influence

is obviously the material substance: how this inherits a propelling power is a secret of nature, but its agent is instinct, for where besides is an adequate influence; the properties of the vegetable are unimportant, the flow of the sap is the same in all, therefore it is dependent on that which is common to all.

Instinct attends the animal, and when any purpose of its economy is to be accomplished physical changes take place in the system, directed by instinct, by which the end is secured. Corresponding operations also take place in the vegetable system; the bud swells, the bark brightens, and the free ascent of the sap follows. Can a tree supply itself and there be no law exerting to the action? A further evidence of the vastness and excellence of the power attached to plants, is that their food is not arbitrary or capricious, not forced upon them, but selected in accordance with the need.

Sir Humphry Davy has given many illustrations of this fact. Treating of Gypsum, he remarks, "Those plants which seem most benefited by its application are plants which always afford it on analysis." Hence it may fairly be inferred, that they select and use it as peculiarly suitable to them. Again, he remarks, "No one principle affords the pabulum of vegetable life—it is neither charcoal, nor hydrogen, nor oxygen, nor azote, alone, but all of them together, in various states and various combinations."^(b) Again, he states, "Though the general composition of plants is very analogous, yet the specific difference in the

(b) Elements of Agriculture—p. 17.

products of many of them prove that they must derive different materials from the same soil.”^(c) Thus it is admitted that each order of plants has its own proper food, which is selected with a discrimination equal to that exercised by an animal, in them it is instinct; in vegetables, the following fact will shew, that without the aid of the senses instinct is a surer and safer guide than with them :—An animal may be deceived in what it eats, but a vegetable cannot be—an animal takes poison, when disguised, but a plant rejects it under every form in which it can be presented. A plant, watered with an infusion of the sulphate of iron, dies; but if it be left optional with the plant, if at a little distance from the roots portions of the earth, steeped in this liquid, be placed, the plant turns from them and not a fibre approaches—the envenomed earth is detected, not as the consequence of sensibility or experience, but from that physical aptitude which instinct directs, which is repulsed by whatever is not congenial to its nature. Animals, rather than starve, feed on various untried substances, hunger subverts their fortitude and gives them up to the importunity of the senses; vegetables have no such resource, but are wholly dependent on the laws of nature, to which they can offer no resistance and of whose power, therefore, they present the most powerful illustration; they take no improper food, and as none of the senses interfere it is probable that a chemical relation determines what food shall be received—substances do not compound when there is no affinity, the roots conse-

(c) Elements of Agriculture—p. 324.

quently can only take from the soil that which corresponds to themselves. Therefore, when the means of subsistence fails, no effort is made, no expedient tried, they wither and die ; but if the soil around them be not poisonous, if it be merely sterile, the roots elongate ; an oak, growing on a rock, affords a striking illustration, by the roots shooting out much beyond their ordinary length and clinging to the rock, send forth branches into every crevice, and where the most trifling portion of soil has accumulated, there they seek for food—though instinct cannot change its principle it can increase in energy ; every want is met by a state of the system, created by the necessity, and which instinct guides.

Another fact, one common to the whole vegetable kingdom, is so striking that it cannot be omitted. The common direction of the roots of a tree is horizontal, and so near the surface as to be benefited by the sunshine and the shower, but the narrow bank which divides the fields does not admit of this natural distribution, an ordinary gale is too powerful for the hold the tree can take of the soil, it guards against the evil by the roots shooting downwards, which at once receives a firmer support and a larger surface from whence to obtain the elements of sap, ; but this is but a part of the sagacity of a tree, for such it would be called in an animal. Not a single fibre passes beyond the bank, however narrow it may be ; the gardener is foiled who attempts to draw them beyond the soil, if their extension be desired the bank must be made wider, the roots soon discover the addition and occupy it. If round a tree growing in a meadow a

trench be cut and the roots divided branches are sent off nearer the trunk, which on approaching the trench pass downwards and crossing the bottom rise on the opposite side and at a depth adapted to the health of the tree spread themselves horizontally—thus adverse circumstances are met and overcome with a promptness and skill beyond the capacity of an animal.

Such is the power of unaided instinct. But there are facts which Dr. Darwen and Dr. Mycock, in his *Treatise on Instinct*, have noticed, which like the distinction which obtain in animals, belongs not to the genus but to individual species. “If a vessel of water be placed within six inches of a growing cucumber, in twenty-four hours the plant alters the direction of its branches to approach the water. A pole placed in an opposite direction from that in which a vine is growing gives it a new direction—the vine at length grows up the pole. A vine never climbs up a cabbage or other short vegetable. Pliny observes, that the vine hates the cabbage and all pot-herbs. A rotten stick, or other insufficient support, is avoided by many creeping plants.” Fertile earth determines the direction of the roots of a plant, to reach it they turn away from that which is barren, if a stone intervenes it is most skilfully passed, the place where the soil is most easily penetrated is selected, and the roots, as if assured of success, commence the attempt, no obstacle diverts them from the object of attraction, the direction of the roots is onwards, and when the stone is passed they advance by the shortest line.

Many instances of the appearance of sensibility in the blossoms of plants and of design in the general

economy of vegetation present themselves, but the subject is familiar. The convolvulus blossoms in every garden, and every where indicates the approach of night and the coming shower. The sensibility of animals, to which this bears some resemblance, may be associated with reason, the mistake is easy, but vegetables exhibit only the living principle, no endowment which indicates a will is their's, the power of nature instinct alone directs, between them and their maker nothing intervenes. He moves in them, not by a principle of self-government but by the exercise of that power, in another form, by which he rolls back the ocean and hushes into repose the tempest. It is by his laws he governs, and instinct is a law forming the sap and maturing the seed—giving the form, or the flavour, or the colour are consequences.

Hitherto the vegetable kingdom has been only seen at a distance and passed by; no one has stopped to mark out its confines or to investigate its laws, or to acknowledge its equal right with other forms of organized matter to the care and laws of their Creator—to this day it is the *Terra Incognita* of Physical Science—even the Botanist has forborne to reach the honour within his grasp. Of the History of this neglected province of nature nothing comparatively is known—it has no admitted law—its existence might be fortuitous—but if this principle be borne in mind, that instinct acts by preparing its subjects, that its operation is on the organic structure, and that what succeeds is but the effect of a preceding cause, the whole of the vegetable economy may be studied without difficulty—instinct is its law, the guardian of

its varieties, the director of its functions ; like animals, vegetables are machines, moved by various influences ; we say of animals that the power that governs them is instinct ; we say from similar evidence that instinct governs vegetables—separate the two kingdoms, write their histories distinct, and ask if there be any other power in nature by which their existence can be maintained ? As a summary of the whole it may be said, that if an animal discharges the obligations of existence by the direction and power of instinct, a vegetable, whose dependence is more evident, cannot act by an inferior power—and if that power be not instinct, I ask wherein it differs ?

OF THE INSTINCT OF ANIMALS.

Were instinct less than a law—were it a faculty—some organ would be its seat, and, like other faculties, it would be subject to change, and to all the vicissitudes incident on physical dependence; but that cannot be the guardian of the life which is itself uncertain in its operation. The power which binds the animal and vegetable kingdoms together must undergo no fluctuation, and can admit of no rival influence; the mutual dependence they have on each other calls not for a partial influence, not one dependent on a gland but one diffused through nature, having the character of a law, and such a power is found in instinct—it is the moving force of the vast physical machine. That animals are subject to this law no one doubts, and therefore it is unnecessary to trace its ordinary operations: it is sufficient to say that it is not an impulse, or a propensity, or a passion, but an energy produced on the physical structure by its operation as a law, by which the system is fitted to discharge those offices as they occur, which the well-being of the system requires; if food be necessary, the want and the supply are alike dependent upon instinct—it creates the want it relieves—in animals it attains its perfection, and, as far as its power extends, when placed side by side with reason, as seen in man, it is more than an equal.

Animals, as such, are more perfect than man, instinct has no contingency—nothing disproportioned—nothing imperfect—every circumstance and condition of physical life is anticipated and some organ appointed for its use—instinct is made the source and the security of animal happiness—it is their all.

If instinct be a law, it is perfect and complete, meeting every situation and circumstance in which an animal can be placed, so that nothing surprises or perplexes or confounds, when pursued by an enemy, and driven from the place it knows to one in which it is a stranger, self-possession and a readiness to accommodate itself, or aid in returning back are necessary, but how are these obtained? Instinct is now put to the severest test; ignorant of all surrounding objects, attacked by its own species and forced into solitude, or sought by others as their prey, nothing seems before it but to wander from place to place till it perishes, for instinct appears to have forsaken it, and on this point to have lost its claim to being a law of nature; but there is no incomplete or imperfect law, none that does not attend every atom of matter in every condition and form in which it can exist, and that does not rescue it from every combination and state of danger to which it can be exposed. An atom abandoned, or an animal forsaken cannot be governed by a law, for the animal has a want not supplied; were this the case—were an atom of organised matter, especially an animal, not protected and the highest wisdom shown in conducting it unimpaired through all the circumstances and changes it is destined to pass, instinct would

not be its law ; for an animal, forced from the flock and pursued beyond its ordinary resort, is in just accordance with the course of nature ; it was intended by the Creator to be so, and therefore the circumstance is provided for, and the evil guarded against. How ? Not by dexterity and cunning, but a faculty has been given, unknown as yet and hidden from the penetrating search of man, a faculty to which he has not even given a name, but which will be readily recognised when described, it is that faculty by which animals traverse unknown regions, and by the shortest route return to the place to which they are attached and from which they have been removed, the fact is as uncontrovertible as the means by which it is accomplished are unknown—reason is here outdone. If, with the quadrant in his hand and the north star full in view, a man traverses a desert, he receives distinguished honor, but an animal accomplishes, without science, all that man attains by its aid : what is this power that makes reason superfluous, if it be not a law ? No energy in nature short of the finger of Omnipotence can impress such wisdom.

This highest act of instinct—this brilliant point which meets the last want of animal existence and gives a completeness and perfection to their whole economy, is among the most conclusive arguments in favour of its being a law—nothing is left for reason to accomplish—led on by a way they know not, and urged on by a motive that offers no assistance, that of returning home, the end is gained. Reason determines from facts, but here none are known ; the hand

that guides them is as unseen, but not less powerful than that which points the needle to the pole.

Facts are so numerous and so decisive on this subject that it is necessary to do little more than refer the reader to the publications on Natural History. Every migratory bird is an illustration, and so are many domestic animals when removed to a distance ; one fact, however, is so striking as to entitle it to be transcribed :—" In March, 1836, an ass, the property of Captain Dundas, R.N., then at Malta, was shipped on board the *Ister* frigate, Captain Forrest, bound from Gibraltar for that island. The vessel having struck on some sands off the Point de Gat, at some distance from the shore, the ass was thrown overboard to give it a chance of swimming to land,—a poor one, for the sea was running so high, that a boat which left the ship was lost. A few days afterwards, however, when the gates of Gibraltar were opened in the morning, the ass presented himself for admittance, and proceeded to the stables of Mr. Weeks, a merchant, which he had formerly occupied, to the no small surprise of this gentleman, who imagined that from accident the animal had never been shipped on board the *Ister*. On the return of this vessel to repair, the mystery was explained ; and it turned out, that Valiente, as the ass was called, had not only swam safely to shore, but, without guide, compass, or travelling map, had found his way from Point de Gat to Gibraltar,—a distance of more than 200 miles, through a mountainous and intricate country, intersected by streams, which he had never traversed

before ; and in so short a period that he could not have made one false turn.”^(d) With such a fact it is impossible to deny the existence of the faculty it was introduced to illustrate.

But we quit this part of the subject to place it under other aspects. It has been stated that instinct operates those changes which are considered constitutional in organised bodies ; at one period the system by this power is developed, at another matured, then rendered prolific, and having risen gradually, so it declines. By its influence the roots of vegetables act upon the soil and sustain the plant—the bark, by the same influence, forms the bud—and thus the whole process of vegetation is conducted. Animals, in like manner, yield their obedience to instinct ; their actions, their expression, their covering, all imply a succession of internal physical changes connected with life. If it be borne in mind that the state of the body is the index of some existing disposition or propensity, and that an adequate cause must have produced it, instinct presents itself as that cause, no other being found in nature—a certain habit gives rise to a certain expression ; now, it is asked, is the expression, or that which it indicates, instinct ? Is the bleating of a lamb, bereft of its dam, instinct, or the consciousness of its loss—the former is the consequence of the latter and therefore is only an expression of its existence—instinct is not an effect. It is the occasion of the tree putting forth blossoms, but their fragrance is not an instinct ; without the blossom there is no fruit, no

^(d) Hancock's Treatise on Instinct, p. 74.

continuation of the species, consequently their unfolding forms part of the essential economy of nature, but the colour, the form, the flavour are not necessary to life and are qualities only. At the creation it was ordained that various species should exist, and forms were given to correspond to the quality or disposition they were to possess; no two species correspond, in vegetables the distinctive character is not evident in the structure. In animals a lion's form corresponds to its spirit, and so does that of a sheep; but while the physical capacity is given in correspondence with the disposition, its exercise is not spontaneous but dependent on a law, which directs its operation. Granite is probably in the state in which it was created, and is a compound stone so evenly mixed that it is difficult to imagine the operation of secondary causes in their arrangement; but however it may have been formed it exists by laws which prevent its dissolving into its original elements.

A similar order of influences act on organised matter, and brings forth the grass in its season and prepares the animal for the business of its existence; besides this, besides that influence by which one organ is the seat of some specific propensity, the appetites and passions of man, his memory, and his affections were given—why, then, has reason been denied to animals? the cause is obvious, their place can only be occupied without its aid.

If animals have not reason, (which is now attended with sorrow,) they have that next best gift, instinct, in a state so perfect that nothing can be added—their cup of happiness is full to the brim, their capacity can receive no more—they are incapable of knowing

the bitterness of remorse or the humiliation of shame—to them care is without a name, for to-morrow has to them no existence. The brightest beams that gladden the face of nature are their's, and place in their possession all that gratifies the senses or renovates the strength.

Man envies such happiness and attempts to gain its possession, he casts aside his reason and sows to instinct, but it withers in his hands—he cannot enjoy as an animal enjoys, for he cannot banish from his mind, however affluent, a comparative sense of poverty and the dread of death. If, in youth, he dreams of undisturbed tranquillity and unabating pleasures, he awakes with a perverted appetite and a distracted mind; some, indeed, after spending their morning and their mid-day strength in the pursuit of wealth, retire with the expectation of passing their years of decrepitude and age happy, because rich, but it is found to be a phantom. Man only enjoys what reason approves. Animals have only to enjoy what instinct gives, The multitude of forms in which animals exist, their dependence on each other, even for the means of subsistence, increases the sum of their happiness, by greatly adding to their aggregate number and by providing a succession of young to supply the place of such as may have been devoured, and thus continue each species to its full extent in all the freshness of youth: so that, in every view, animal happiness is a blessing worthy of him who gave it; their physical enjoyment is not only of high value in itself but it qualifies them for the relation in which they stand to man. They have the same instinct with

him acting on the same appetites and passions—the same sympathies—the same likes and dislikes—the same pleasures and the same pains. They have no natural fear of his person, but being assimilated to him by many reciprocal feelings they delight to be near him, to obey his will and to be his protector; were there no feelings in common they could not serve because they could not obey him, but as the routine of his life is their's their utility is apparent; he can influence their feelings and employ their strength; they plough his land and guard his house, and, in many instances, sorrow at his death, and have even been known to make his grave their bed.

Man's strength would fail, and his mental energies stagnate, did they not relieve him from many burdens he must otherwise sustain—reason arms him with the power he exercises over them. Did they perceive their inferiority, their obedience would be felt as a punishment and resisted, but being subject to a law they are at once unconscious and obedient; had they the reason Locke ascribes to them, to obey an intellect differing from their own only in degree it were unreasonable to expect; superior in strength they would conflict and succeed, but reason being withheld they yield submission to the voice of a child, and quietly go where it commands: governed by their feelings, they are formed by discipline into the will of their master, and thus the goodness of the Creator is apparent in the bestowment of as much happiness as the world can admit, while it is connected with utility.

But casting aside their thralldom, and viewing them *as possessing* memory and benefiting by experience

they are presented under a new aspect—if they benefit by experience they have the power of choice, and what is their choice and in what does it approach to reason? They have choice but it is not of sentiment, their preference is determined by their senses, by them they choose of what to eat and where to sleep, and how to avoid danger and where to seek for what has gratified—they choose a spot to build their nest and with much circumspection conceal their hiding place, which also they select with a full sense of the evils to be guarded against. This is their freedom, one which consists in the dictates of their feelings and in the result of experience, not of deliberation and forethought; they are not free as man is free—it is not the freedom of a rational mind—an impulse guides them, yet they are free to gratify their senses while they are led onwards by an irresistible power: conscious of what they do their actions wear the aspect of design, but their power to resist the current of their nature is not greater than exists in a vegetable.

To concede to animals the capacity of rational choice is to break down the separating line, and to place them, with Man, at the head of the Creation—they cannot be his equal and yet subjected to his will. Animals cannot reason, if they did, they would err and bring upon themselves disorder and wretchedness, but as they exist they are happy, and because their government provides for all the circumstances of their being their happiness is final—they cannot err and forfeit it—but although animals cannot reason the attitude of greatness rests upon them and marks

their bearing—they are not man's equal but they are his companions—they cannot mentally improve, they have not improved—the dog of Esculapius was as the dogs of the present day. Buffon remarks, that their capacity is stationary, they adapt themselves to circumstances, but they originate no system. Instinct leads the animal round a contracted circle, strewed indeed with pleasures which to it are real and substantial, but could it think, these would be but a shadow, unsatisfying and without a permanent result: man claims animals as his property, and the end of their creation is answered when they have become the means of his subsistence. As creatures of sense, their whole being is concentrated in its enjoyments; they have no mind to which they appeal, they originate no plan, they comprehend no principle, they obviate no difficulty, they anticipate no evil, the past, the present, and the future are one to them. As the property of man they are irresponsible, his responsibility to them is humanity: they are the instruments of his toil, and the means of his subsistence, but yet they are great because they possess all that man calls his, (reason only excepted); they can imitate, they can learn from experience, they can sympathise, they can love, they can remember, and they can communicate their knowledge, and although they cannot reason, they have in the principle which directs their actions its concentrated force—such is their governing law, instinct—deny them greatness, and man strips himself of the beauty that adorns him. He learns from reason—and he learns also from sense—for sense is unnecessary in many transactions even of

his life. We would not undervalue that which raises him above himself, but we do contend that the gifts bestowed on animals make this earth to them a paradise, and fit them to occupy it in the fulness of its joys; but man is dissatisfied and seeks for something to call his own, and vainly marks out a plot of land and gives to it his name, but every insect and every winged animal defies his power—but that gift cannot be small which on animals confers so much happiness, and if they are not immortal they are not criminal. Let us now notice the admirable adaptation of their faculties to their circumstances.

Memory is so comprehensive and efficient a gift that, when connected with habits derived from experience, it becomes the counterfeit of reason, and this deception is heightened by another and still more imposing capacity given to animals, that of communicating their knowledge to each other; and if it be added, that these are only the auxiliaries of a principle of influence wholly perfect, it is not surprising that minds of the first order, have yielded to the delusion and advocated the equality of animals with men in principle if not in degree. That animals remember cannot admit of a doubt—that they communicate to each other is also well-established—but this is not to reason but to remember. A system of acting is established admirable in its administration, but its relation to reason is independent of the actors; their's is the fruit of experience, the reason is in the law which controls them; that must have the semblance of reason which is founded upon it, for the effect of experience is to aid the resemblance—all that man does is ascribed to

him as a rational being, all an animal ordinarily does is ascribed to instinct. Both are errors ; memory, with the power of communicating knowledge, creates a system of its own and establishes by habits, that which is capable of being substituted for the exercise of reason ; but this is not instinct, neither is it reason.

Experience is the great basis of the social compact, it gives to man his laws and to animals their habits ; it is unnecessary to know the principle in learning the practice connected with it—that which is learned by experience does not require to be confirmed by reason, its conformity is learned by its practical good. Is it necessary to study the non-conducting power of wool before a coat can be worn with confidence ? Experience, which is alike to animals and men, with the capacity of teaching others what is known by the individual, is the practical basis of their respective character ; not in its moral relation but in its other relations. It is not necessary to exercise reason in order to act rationally, it is enough to be rightly directed—animals therefore may well excite their advocates to a belief in their rationality.

The dog that in every direction but one sought his master, without success, and then without hesitation and with apparent confidence pursued him on that road, had a sufficient guide in memory. The dog had accompanied his master in that direction, but beyond the point to which it had formerly gone it does not proceed : had reason been possessed, a fair opportunity was here presented for its exercise, but no expedient was tried, no effort made to renew in some other direction, the pursuit—having gone to the extent of

its experience and failed, the dog returned back to await its master's arrival.

This circumstance, so often quoted as an evidence of thought and design in animals, is within the power of memory to effect. A multitude of instances might be related, but the fact of animals possessing memory is indisputable—that of reason none—every domestic animal is an illustration of the force of memory : but they do more than remember ; they, as have been remarked, communicate their knowledge to each other and confer together : the expression of many of their accents are well-known, but by what means they communicate facts which do not interest the individual is difficult of apprehension.

A gentleman wished to establish a rookery in a grove near his house, and a magpie having built in one of the trees the eggs were exchanged for those of the rook. The young were brought up and the family lived in harmony till the spring, when each claiming a right to the grove, a battle ensued, in which the magpies were beaten and driven away, but in a few days they returned, accompanied by a host of combatants ; being marshalled, the battle was renewed, and thus overpowered by numbers, the rooks after a hard contest, gave up possession of the grove, and the auxiliary magpies, after celebrating the victory with much chattering, retired. This fact was related to me by the proprietor of the grove. In the East Indies, the sight of a Boa Constrictor throws all the smaller animals into the most overwhelming alarm, the young and the old are alike appalled by its presence ; but it is not so with the animals of this country,

they have not been taught the character of the serpent. Mr. Kelsall, a gentleman now residing at Liverpool, has an animal of this description, and as it refuses to feed on any animal, however recently killed, its prey is necessarily given alive. A hen, or a rabbit, when put into its cage manifest no alarm, but hop over it in all directions, and sometimes the hen pecks its skin and they seem indifferent to each other, and no uneasiness is manifested till the Boa puts itself into the attitude of death; instantly the victim is indiscribably agitated, and feels by experience, that which the animals of the East that had never seen a Boa know without. The animals of every country also teach their young what to eat and what to avoid, what to fear and what to confide in. In autumn the young and old birds flock together, and after a few weeks separate; the reason of their meeting is not obvious, like that in the spring, unless it be to communicate the experience of the year to each other: that this may be the object the fact that all the animals of the same species in a country are equally sagacious, leads to the belief of. When a desert island is first visited the animals admit the approach of man, but if he injures any and they escape, the whole are informed and keep at a greater distance. Why is a hare frightened at a weasel but not at a horse?—why were the seals so unsuspicious when first they became an object of merchandise as not to move from their destroyers, and why are they now so difficult of approach, except when so young as to be helpless?—why have the whales retired beneath the dreary and desolate icebergs, rather than delight

themselves in the open sea, but that man is their enemy, of which the young are made acquainted?

Facts of a similar character are under daily observation and need not be stated; enough has been produced to shew that animals are capable of remembering what their senses have experienced and of communicating to others that which is influential to their existence. A bear does not teach its cubs to dance, nor does a horse teach its young to submit to the will of man, but if they were at liberty they would teach them to avoid him. If it be borne in mind that animals are governed by a law, which is itself a demonstration of reason and whose principle cannot be perverted, it must be perceived that when aided not only by its own but by the experience of the whole species that occupy the same climate, the conduct of animals cannot be otherwise than an example of reason. What animal makes itself ridiculous by an incongruity of conduct? It is impossible to laugh at the folly of an animal, it is always rational when not constrained; but reason does not dwell with them, it is not their own, and as a proof that none are rational, none are idiots; none can feel the want of reason, or can say, my Maker has withheld a gift and I am inferior to others, but all are alike when under similar circumstances—one may be stronger than another, but not more cunning.

Instinct being common to all, and equal in all, is an evidence of its being a law. Did animals reason they would doubt, they would be perplexed, and each would see with its own light, but they can only act wisely and by a wisdom common to all. The endow-

ments of animals above vegetables are distinct from instinct and admit of being taught, and are the subjects of education. What is desirable in our children more than a good memory and a readiness to receive instruction—they need not reason and they have it not—it is not a power to direct them, the effect of management is seen in the bringing up of animals, which are modelled to the will of their masters.

I ask of Parents to reflect on this fact, for the same dispositions of their children are capable of a similar controul, and, if so, Parents have the power of deciding their character. If it be established that the influence of instinct is physical, acting on that particular gland or portion of the system which gives it efficiency, and that while the tendril was given to the creeping plant and feet to the animal, to enable them to perform what instinct requires—that where sensation has been bestowed another influence is admitted, and discipline becomes necessary to direct the disposition, sensation was bestowed not to destroy order or violate the laws of nature.

OF THE INSTINCT OF MAN.

An infant is, in the fullest sense, dependent on instinct—its capacity to discern, and its strength to act, are less than in other animals; nor is this feebleness compensated by any endowment exclusively its own. Reason, in common with the other faculties, has, at this period, scarcely germinated; and so feeble are the voluntary powers of a child, that the motion of a limb, or a flitting smile, excites the alarm of the mother. When it opens its mouth, it is an expression of hunger, and being fed, it again sinks into a state of less apparent pleasure than is evident in the young of lower animals. It may be gleaned from the writings of Dr. Reid, that he ascribes not only those actions to instinct in which the senses are influential, but those also in which they are not concerned, as the beating of the heart, and the heaving of the lungs; but a machine must be put in motion before it becomes subject to its laws, the heart must beat before the child can properly be said to live: before birth the blood passes through an aperture in the heart and the pulsation is derived from the mother, but at birth the aperture is closed, and the first sigh is heaved, and the first pulse felt, but instinct did not form the aperture consequently it did not close it—the physical structure is assigned to instinct in a fit state for its operations.

In the tie which binds a mother and her infant the strongest energies of instinct are put forth. The desire for food in the infant, is met by a corresponding impulse in the mother—so that by the expression of want her sympathy creates its supply, and instinct places the child to this provision of nature, and directs its mouth in an action which far surpasses all others of which it is capable, and probably excites the fondest pleasure in the mother which the human breast can know. The want of physical strength and quickness of apprehension in the child, have in its mother a substitute ; her energies are roused, her fortitude strengthened, her courage braced to the most powerful efforts, and mother and child are bound together by the full force of instinct. Is the child's life in danger ? the mother presents her own—the most deadly pestilence cannot sever her from her babe. Are they shipwrecked, and does the mother tear from her breast her child, in its struggles to maintain its grasp, and present it to be engulfed and perish in the advancing wave that she may disengaged escape ? This she can never do, instinct has made them one and they will die together. If the instinctive care of the mother be not in every instance so vigilant as in an animal, circumstances have made it so. The life of the child is not so exposed as the young of animals, and therefore less care is necessary, but when instinct can render aid it is not withheld—instinct never sleeps. The cry of suffering is hushed by the accents of her sympathy, the cry of anger by her silence and neglect ; at the sight of a stranger it clings to its mother for protection, but at her bidding the offered attention

is received. Her breast responds to every accent of pleasure or of pain, of confidence or of fear, that the child may utter ; her voice imparts her will, and such is her authority that her children are rude or civilised, intelligent or ignorant, lively or dull, as it is exercised by her, and thus they are modelled into her likeness with the same accuracy that is exercised by an animal over its young. Why do the children of the poor bear more of the character of their parents than those of the rich, but because they live more with them ? The affection of the mother is an instinct and obedience in the child not less so.

The instincts of infancy cease in childhood, but as their existence and utility commence and terminate together, others arise in their place : the mind matures at so slow a rate as not to occupy the place of instinct till manhood dawns, and as the power of obedience remains as long as that of dependence, the right of a parent over a child is great and of many years continuance. Instinct consequently is of the highest importance, and claims the greatest attention.

It is unnecessary to notice every developement, it is sufficient to state that the passion or appetite which represents an instinct points out the object for which it was given ; but there are instincts which are independent of the passions, some of them may be noticed. To wink the eye, or to start back from danger, or to recover from a stumble, to raise the arm to ward off a blow, are instincts. Self-defence indicates the sex, and is an instinct. In the males of the more perfect animals, personal courage, which Gibbon designates as a vile and vulgar qualification, is given for them to

protect the females of their species—cowardice is equivalent in the physical constitution to imbecility in the mental—instinct points out the right of the female to protection, and deals out the blow that may secure it. A knowledge of the sensible properties of matter is an instinct, or their first contact must strike a new-born animal with horror, and confound its senses.

Philosophers may doubt the existence of matter, but instinct teaches it. We find the young duck well acquainted with the properties of water and ready to venture upon it, but the chicken having touched it with its foot draws back. To eat of the produce of the soil is an instinct common to all animals; sleep is also an instinct: but the right to property is claimed by none but man—in this instinct animals have no part. The place where an animal brings forth its young is defended, and the bow on which a bird sleeps it claims; but of property, as having a relative value, they have no knowledge; a child seizing hold of a toy and claiming it as its own gives it the character of an instinct. The earth was created for man and given to him, he cultivates his possession and enriches it by his labour, but it was previously his own. The savage, roaming over vast tracts of which he makes little use, contends for his right—extreme ignorance does not exclude his sense of the proprietorship—such a feeling we may therefore suppose to be mixed up with his existence.

The last instinct that claims our notice is marriage. In the most savage tribes, where chastity is not a virtue, marriage is sacred, and in the most voluptuous and depraved it is still regarded; but where virtue is

honoured it is the key-stone of the social arch. Polygamy is a gross outrage on the law of nature, it binds together man and wife and they are one ; to add to the number destroys the principle and it becomes no longer marriage. Many animals choose their mates, and man is included in this charm, and when selected they are faithful. Doves often reject a proffered mate, and having paired, a temporary separation does not dissolve the attachment, but an opportunity arriving they acknowledge each other and are one again—sometimes their affection is so strong that separation occasions death.

Marriage is the natural condition of Man, it gives him his most endeared possession, and is the source of affection to his offspring, and the only security for the continuance of the species. What father cares for his illegitimate children, they may perish and he weeps not, vice gave them birth, and nature frowns upon the deed by withholding parental love ? When instinct is obeyed, and a union is formed, the affections are concentrated and fixed permanently and invariably : deformity may succeed to beauty, and poverty to wealth, but nature is true to her laws, and the marriages she forms she maintains unshaken in affection, undiminished in sympathy—the tear of disappointment in business is hidden, and the desire to conform to circumstances, without upbraiding, secures their happiness.

But it may be asked, if instinct be a law, is man, as its subject, responsible ? To this it is answered that man is no longer a machine than instinct has the sole controul of his actions—the dawn of reason changes his condition, so that a single principle no

longer governs his conduct—at the point at which instinct has completed its provision for the continuance of physical existence, reason commences its direction, and, being its own guide, is responsible. The man that thinks, acts for himself, he is uncontrolled, and his greatest responsibility consists in the use he makes of his reason. Thus we find that two principles govern man—Reason and Instinct. To the first he owes all that constitutes him man ; to the other much that constitutes his social character—reason, by making him free, makes him responsible. Instinct embraces within the circle of its power all that can die—all, except that which thinks. Is it asked what is the earliest subject of education?—I answer instinct, Reason is through no other channel so accessible to the Master—let instinct be disciplined and the education of the mind is easy.

The subject is thus introduced that the reader may not be unapprized of the design of these pages, which is to inquire how far it is possible, by education, so as to insure a given character. To this end it is necessary to obtain a knowledge of the foundation on which the social character of man rests, which can only be effected by establishing a broad and unequivocal line of distinction between instinct and reason, which will be further attempted in the next chapter.

OF REASON.

Reason, which gives so much dignity to man, bears no resemblance to the other faculties, either in the means of its increase or in its purpose. They, by an inherent vigor, become strong and expressive, influencing the various functions on which the system depends. While reason is dormant no act of the infant marks its existence, it is hidden even from the scrutinizing eye of the mother, it may be an idiot and she know it not, but when it becomes evident that the faculty is possessed it cannot be exercised, and, to all practical purposes, it is useless—a child cannot reason and no innate feeling kindles a desire for instruction. Instinct is the only active principle at this period, and gains an ascendancy not readily yielded up, for, as time moves on, it acquires strength; while the mind is inert, the subject of no corresponding influence, and presenting no counteracting power, every succeeding year is marked by some physical development, and presents a new subject to the government of instinct, and the form and efficiency of the body being attained, the youth comes before society buoyant in all the hilarity incident to his age, but the reasoning faculty is yet capable of but feeble efforts; the mind has scarcely a desire to be instructed: at the

same time physical energy, which so much attracts and delights, is the antagonist of reason, but the period has not arrived for its becoming the governing principle, till then parental authority is substituted, and the children rely on the judgment of their parents. In tribes of hunters, in vassals, and in very ignorant peasants, parental, or rather instinctive, authority continues no longer than till the child can procure the means of subsistence ; but it is not thus in educated families, for in them authority remains till an equality of mental strength substitutes affection for duty ; reason may yield voluntary obedience but it cannot be controlled, the exercise produces an equality which destroys parental authority. The law of nature assigns to parents the training up and teaching their offspring ; in common with animals they have instinct, and whatever has a physical origin or dependence, the efficiency of such is certain and the end secure : but reason must be cultivated, and brought to a vigour distinct from its original condition, before parental authority has a natural termination.

Thus, the growth and increase of the two principles of action, Instinct and Reason, are as distinct as their characters ; that which is animal, parents, by an instructive power, control and model ; that which is mental can in no otherwise be influenced than by increasing its strength, its character continues under every circumstance the same ; instinct is essential to physical existence, reason to mental. The one is a law with inherent power, the power of the other is acquired ; instinct is unerring, but reason hesitates

and doubts, and from deficient evidence fails ; but with this superiority instinct cannot think, while thought constitutes the very existence of reason.

The distinction between these great and governing powers is not accidental but real, not in the mode of their expression but in the principle of their existence ; the one originates and directs, the other executes and obeys ; the one is a faculty, the other a law. Were it not thus, they might amalgamate and sink into each other, for the means of their information is equal—the same senses present to each the same qualities of matter, and give the same general impression of all external objects—no animal mistakes one substance for another or misapplies any, its knowledge is as extensive as its means, but is useful in no other way than as a guide in maintaining existence ; beyond this external nature does not interest an animal, its self is all its care, it acts from habit or impulse, because its government is perfect and does not need the aid of reason. But as animals have all the knowledge that man can gain by the senses, why do they not, like him, reason upon it and endeavour to acquire a knowledge of first principles ? but that they have not had the faculty of reason bestowed upon them.

Instinct is an illustration of a law, uniform in its power and universal in its application—there are no wise or foolish animals, none that indicate the possession of reason. The Stork, in every region, knows its season ; but reason has no law to impel, nor innate sense of want to stimulate, no energy to persevere ; as reason is in infancy so it would continue did not cir-

cumstances, without itself, compel exertion—it bears no resemblance therefore to instinct. Between them the gulph is wide and impassable, no isthmus joins them, one is dependent the other free, one an executive power the other an originating principle, they have nothing in common but the use of the senses: thus endowed, they occupy and become the acting agents of organic matter, from its lowest to its highest form, from its being the recipient of life to its being also the recipient of reason—that one should exist in matter is not more difficult of apprehension than that the other should. That life should be protected by a law which it can know nothing of, and that reason should be so endowed as to survey the operations with delight, and by being able, in a manner, to comprehend the harmony and order of the system, be also able to combine, arrange, and designate, and thus humbly to imitate, is in accordance with the works of the Creator, who by a display so magnificent of his power and goodness, calls for a capacity to perceive its beauty and to be inspired with a feeling of love and adoration to its author. Instinct has not this capacity, for it cannot worship; reason, by being capacitated to see the impress of wisdom and of goodness, by the very capacity of seeing loves, and when applied to the Creator love is adoration. It is not presumptuous, therefore, to say that instinct is reason exercised by the Almighty—that reason in man is a power delegated to him to exercise for himself.

The mind, in early infancy, is not only inactive but insensible to the influences that operate on the body; the hidden power by which the instincts, in their order,

are called forth exercises no influence on the reasoning faculty, which, amidst this splendour, lies concealed and helpless in its native ignorance. The power that moves the whole physical machinery passes it by as not subject to its authority—there is a path by which it is accessible, but that path is remote from instinct. Did the incipient faculty of reason receive no other light than instinct yields, the fetters of its imprisonment would never be broken; for, in the early state of infancy, ideas do not exist, none are innate and none were prior to the senses, and, when acquired, reason must gain strength before they can be beneficially used. But, it may be asked, if reason at birth be only a germ, insensible to the causes which invigorate the body, what are the evidences of its existence and by what agency have they been procured, none exist at birth, no such evidence is given, and the agency by which they arise is not ascertained? Not by its ideas, for they are the common property of all sentient beings, and therefore are not expressly applicable to any endowment; it is not by them that the first stimulus to reason is given, reason must exist before it can apprehend them. Caspar Hauser was not without ideas, but he was not, in consequence, intelligent: an idiot and an animal have ideas, but are not rational, another influence fans the mind when it sends forth its first faint beam. If ideas are insufficient, so are the senses and passions, and did they excite the faculty of reason it would need no other instructor, for that which approaches the mind teaches it; but reason is not schooled by the passions, before their influence it is dormant, a death-like torpor

broods over it, and its darkness no physical energy can penetrate and open a passage for a ray of light to fall upon it. This embryo state waits its appropriate principle of animation, with which it must be imbued before it sends forth its first feeble effort.

The mind, unable to commence its own operations, is equally unable to pursue them; entombed in an organised body, it is estranged and out of its element, it harmonises with nothing around it, nothing physical seeks its aid, and the body and it are unfriendly to each other, all is material but itself: how, then, can they own a common impulse, or be essential to each other? That which causes the bud to blossom and the bird to migrate cannot cause the mind to think; but there are means established in nature by which this is effected. Where, then, do they reside, what is the power, and from whom does it emanate that when it approaches the spirit that is in man, it calls it forth?—it is from a kindred existence, another spirit, a mind emerged from its own darkness and strengthened by its own exercise. This is the power—this the energy, and there it abides—her spirit who gave birth to the child triumphs over instinct, and passing through its strongest influence unites herself to her babe, not by the influence of passion but by the sympathy of mind.

It is not difficult of belief, because not contrary to the analogy of nature, that she who has imparted of her vitality can afterwards impart of her spirit, far more than the feelings of instinct she gives to her child, and watches for a return of a similar character. Her love is not wholly animal, for the mind can love

as well as the passions, and love can only exist by being reciprocated. Instinct revolts at an abandonment, but a mother does not love an idiot as she loves a rational child, they are strangers to each other except as instinct holds them ; when she first knew her babe its mind was as a diamond in the quarry, discovered only by research, and valuable only as labour is bestowed upon it ; she bestows that labour, but, if it is unavailing, her affections assume another character—but we will banish the subject.

Mind has been discovered not concentrated and active, but a mother's smile, like the laws of nature when acting on chaos, reduces its elements to order and the dawn of intellect commences. As the mind does not spontaneously think, when connected with matter, it must commence by some external agent, and where does this exist, if not in the species—in some one that cares for and loves the child. Peter the Wild Boy and Caspar Hauser were not idiots, but they could not think, and to other means of instruction, however applied, their minds were impervious, mind meets mind, and it is accessible in no other way. I ask, can an infant be otherwise taught than by its species?—I ask, again, can it be taught at all, if not taught in infancy?—facts have determined that it cannot.

Was the mind subject to a law of nature, the mother would have no influence upon it, it would not be mind, because its materiality would be thus demonstrated, for the sphere of acting of a law is the material world, and whatever is subject to its power partakes of its nature. Hence, another and superior influence

is necessary, which is found, in ample measure, in the mother's kindred spirit ; this and this alone removes the load that presses down the incipient powers of its own image : this connection, by divesting the mind of its imputed materiality, marks a broad line of demarcation between man and animals—that which has a physical origin or dependence, is readily taught and disciplined. An animal is thus circumstanced, it has no will but is directed by its master ; but reason, when possessed, determines for itself—instinct is governed by impressions, mind by its own decisions, and thus the separation is wide and impassable between physical and mental influence.

The fact admits of illustration in the experience of many parents, and bears on the subject before us. Should a child die before maternal feelings have been exercised upon it, should it die in embryo, regret only is felt by the mother, for the child had not existed in her affections—anticipated happiness has failed—the prospect has closed—it is a disappointment. The mind has not been severed from that on which it had delighted, there is no maternal sorrow ; but if early in infancy, when instinct had just bound together, by its sympathies, the mother and her child, it dies, a cord is cut which vibrates keenly—this is instinct's sharpest anguish, but it passes away and is forgotten. The feelings are physical, and when that state of the system which is called into exercise by the birth of the child has subsided, and the ordinary state is resumed, the anguish ceases ; but a little further on in life, after the mother has excited the expressive smile of affection, an expression which only is induced

where the faculty of reason exists—if, after such a smile, the child sickens and dies, the mind is wounded, an endearment is removed, which seems to have no substitute; time, at length, reconciles the want, and the oblivion thus effected is desirable, for protracted unavailing sorrow is not a virtue.

An infant mind, brought into exercise by the kindness of its mother, or by one to whom she has delegated her office, stops at the very place where the excitement was suspended. The mind makes no voluntary effort for its own improvement; it cannot, in its own nature, be indisposed to improvement, but as the tenant of a body, dependent on the senses, it is estranged, Education goads it on, and here it may be remarked, that if a mind, already in part instructed on many subjects, needs compulsion to continue its investigation, it cannot be inferring too much to say, that when overwhelmed in its native darkness it will not, unaided, seek to be enlightened. If a child of two years old can only be instructed by those to whom it is attached, and by them only in a way of which affection is the basis, what is the way by which a babe can be taught?—spirit acts on spirit, and enlightens where other means fail to instruct—by this capacity man attains what he knows—he could not know his Maker was his mind inaccessible but by the senses.

Mind is not alone estranged from all other beings in the universe, it sympathises and can communicate by other signs than words. Can a mother only love as an animal? Is she dead to herself, dead to the life she has given, and which now represents her? Is she cut off from intercourse with her infant, except

by her physical affections? Has thought no consequence? Is simple consciousness all that is implied in mind? This is impossible—to be conscious of existence and be unknown to other existences, is to be conscious of inanity and uselessness, and is that possible? “I think, and therefore I am,” was a remark of Des Cartes, which convinced him of his existence, but he could not have thought without a subject. A similar fact convinces a mother of her relation to her babe. I think and can communicate my thoughts, or why possess them, and who, like her babe, concentrates their force and replies to their expression. If this be not intercourse what constitutes it? Consciousness is increased in strength and diversified in its object by every accession of knowledge; new relations are thus formed and other lights thus presented, when the properties of matter are inquired into the senses determine the fact and give the property its name; but the mind is independent of the senses in its own essential being, and therefore is not absolutely taught by them. In its intercourse with other minds is it divested of sensibility, can it not feel and make its own impressions felt by the living object of them? Is the love of a husband to his wife mere sensuality? If it be more it is superior to the utmost attainment of sense, and has another nature. If the senses refuse their office of speech, and hearing be denied the mind, the mother can kindle up the spark of intellect, and, though deaf and dumb, the child is rational, and the mother knows it to be so: but was the child not beloved it would become an idiot. This *may be* fairly inferred from the little intellect that is

possessed by all whose infancy has been passed with the least possible intercourse with the species.

When affection has not stimulated the mind it retains its embryo state, for neither instinct nor experience can teach it. Is the child the miniature of the mother? Are they but parts of one whole? then their endearments are such as they alone can feel; or, to place the subject in another light, are the senses of the child perfect? then it is the subject of instinct—is its mind perfect? then it may be acted on; but what has power to act on a principle unlike itself where intercourse can have no influence. Animals of different species are unknown to each other, every principle has its natural and appropriate sphere of action, from which it cannot be diverted? Instinct has its sphere. The mind, in like manner, acts within the circle of its power; and what is the circumference but the wide extent of intelligent beings; penetrating where thought can enter, it has no boundary, and meets with no resistance—itself is thought. Nations are, like individuals, diversified in knowledge, because diversified in the means of instruction, for Education models the national, by modelling the individual character.

But what is Education? Is it not bearing upon the mind an influence, similar in its character and result to that a mother exercises? Mind, under every circumstance, is the agent by which mind is cultivated, and its pabulum is truth; nothing besides gives mental strength, and truth cannot be apprehended unless the mind has been strengthened by a preliminary exercise. Hence may be gathered an additional

argument in favour of the weak and puerile being benefited by intercourse with stronger minds, by affection without the influence of direct tuition.

The first living effort, the first throes of animation of the infant mind not being spontaneous is, necessarily, more dependent than its after progress, but even thus it is aided by situation, circumstances, and influence, independent of instruction; and, on instruction being given, is the nature of its influence other than that of imparting strength to the mind through the agency of another mind. A school-boy, who has been long applying with unavailing attention to his theme, the subject of which seemed just within the grasp of his capacity, but yet was not attained, has by a single remark of the master's the difficulty cleared up. The boy's mind had been prepared, by a diligent study of the facts and evidences, but the power to reduce them to order, and give them a bearing on each other, was not acquired—an apposite expression resembles the bursting of the sun from behind a cloud, the object that had been shrouded in a mist is now made visible.

The capacity to attain facts, and sentiments is dependent on the senses, but to employ them for purposes approved by the mind, requires its previous training; the thought of the inexperienced is folly, thus the progress of knowledge, and the very basis of society, depends on the aged instructing the young; the words they use are but signs to convey their thoughts—it is the mind which has intercourse, mind acts on mind—to be without such intercourse, is to be alone in the universe, is to be a blank, a shadow, an

ideal being, cut off from the fountain of knowledge and blasted. It is impossible to deny that to mind which is granted to instinct. Mind cannot exist, excluded from other minds—its character implies association, and an exchange of sympathies. The influence of mind over mind, in its elements, and apart from signs, and in its power to communicate abstract thoughts, is consonant with its nature ; or men, unas- sociated by country, unknown by language, would, on meeting, be a terror to each other and without a sign by which to hold intercourse ; but, under whatever circumstances they meet, the consciousness of a simi- larity of nature, gives to them a reciprocity of feeling, an interchange of mind, as was exemplified in Capt. Parry's intercourse with the Esquimeaux, who, before, had seen no other human being, save their own little tribe.

Had mind no secret inexplicable intercourse, the knowledge of man by man would be reduced to that by which an animal knows its species ; or, were the senses the only medium of access to the mind, then man is cut off from his Maker, and has had no Reve- lation from him, and cannot know his will, or offer to him his adoration and his praise. The mind, aban- doned to itself, shrinks and withers, indifferent to the future and careless of the present, it rests on its own inertness, and if not early rescued is lost to improve- ment, and is through life incapable of worship ; or if a kind mother has excited in it some manifestations of life, on her power being withdrawn it stagnates. The children of the most rude and abject of our race are not irrational, but their powers through life are

not advanced beyond those of an European a few years old—but the hut of the Indian needs not be entered. The untaught, untrained children of our own peasants, occupied through life in some ordinary calling, pass through it without being the subject of remark—they fill their station and more is not required—at length time blunts their senses and their mental weakness appears : their character heretofore depended on their physical energy, but this is gone, and now that memory has also failed they are reputed imbecile ; but they are not more so than they always have been, their minds never had been exercised, they never had a capacity beyond a child's, and in this state it continues, it was always weak for it was never cultivated, their daily task was a habit and did not require thought—add experience to the mind of a child and the portrait of a clown is drawn.

THE SUBJECT CONTINUED.

Among the aphorisms of most nations, some hold up to ridicule the aged, who mistake their self-conceit for wisdom—we say of such that they teach old wives fables. Women are not more entitled to be the subject of the remark than old men, but that their minds are ordinarily less cultivated. The meaning intended to be conveyed is, that an uncultivated mind is not honored in age when unfitted to give council.

That a stagnant mind cannot be roused by ordinary circumstances, or by its own energies, is evident from many facts. An idiot can, at no period of life, be taught any thing; neither the mother's sympathy, nor that accession of ideas which gives to this blighted human form some conformity to the will of its parents, nor the influence of example nor the force of discipline has any access to the mind. Whether the human body can exist in a state so imperfect as not to possess a mind cannot here be discussed, but that it may be so circumstanced that the parents are unable to give it instruction there exists too many painful instances. The condition of the half-idiot is not less painful. His physical developement being incomplete the mind advances but one step and stops, tuition is then unavailing, the little that has been acquired was in infancy, but now the mind is sealed, sufficient

strength has not been imparted to admit of that further effort, which leads to the comprehension of a subject, and no after period is more propitious. The mind having advanced to the threshold ceases to go on, but enough has been accomplished to show its rationality ; should the system be so disturbed that the mind can gain no authority, it never enlarges ; the body, under such circumstances, acquires the control, and may be said to fix the boundary of the mind. A convulsion or a blow, sometimes breaks down the connection between the senses and the sensorium, the organization being thus injured, ideas cannot obtain access to the mind and communicate the elements of thought ; reason, cut off from the means of increase, becomes stationary, but the capacity previously obtained does not diminish, it continues of the same strength it had previous to the interruption. When the injury done the brain is so severe as to destroy the capacity it has, so far as I am informed, always ended in death ; when the injury is not incompatible with existence, the intellect continues through life the same in strength as when the injury was inflicted : a child of two years old retains the capacity of that age and no system of education improves its strength ; one child has sufficient intellect to be made the bearer of a message, another learns a mechanical art, but no new principle can be comprehended—the mind is excluded from an accession of light by an injury done to the medium through which it otherwise would pass, so that at thirty the mental capacity is that of infancy, and thus it continues through life. When the injury is less severe some progress is made by skilful manage-

ment, but the progress in knowledge is much slower than in a weak but uninjured capacity ; in most cases, all that is accomplished by education is the acquisition of facts, so as to act upon them in the common transactions of life.

Another fact is illustrative of the same subject. When the body is so frail that ideas are imperfectly formed the judgment is erroneous—hence age is never the season of mental improvement, although not of mental death—the delirium of fever, intoxication, and starving contribute to mental feebleness, but the return of bodily health restores the mind to its former strength, and, should insanity arrest it and thus suspend its office, does it forget ?—is it deteriorated, because the instrument of its power is incapacitated ? Mark the termination after many years of sad aberration, it not unfrequently happens that a few hours before death the mind recovers its ascendancy, the strong arm of disease which had held it down is weakened by the approach of dissolution, the mind, in a measure disengaged, rises above its material thralldom and resumes its office and goes back to the very point at which it sunk and inquires for the transactions of that day. If during the aberration nothing had been gained, nothing had been lost, ideas throughout the period had been received in quick succession, but the medium was imperfect and they were unknown to the mind.

These interesting facts open a field for discussion of considerable interest, but all that bears on the present subject rests on the relation the brain bears to the mind—it is its seat but they are not

identified—the brain may be sufficient to invigorate the muscles and preserve the whole organization in full health, while the mind gains no strength ; made stationary by an accident the mind continues so through every change the body undergoes; inadequate to its advance the body is equally incompetent to its destruction, it therefore is a clog and hindrance of the mind, not its ally.

The mind being hindered in its progress by the state of the brain is a fact so familiar as to be of common belief. The mind of an embryo is excluded from all knowledge, nor can an infant be taught to read—the brain is not then in a fit state for the exercise of the mind : at six years old many ideas have been gained, and the mind, by being exercised, is made capable of application, so that being taught to read is not difficult, but if this task be not then accomplished at thirty an increased experience does not make this effort more easy—the child, in aptness, surpasses the adult. There are seasons in the growth of the body adapted to certain developements of the mind, and claim attention: the man of thirty, who learns to read, however extensive his knowledge from experience, must bring his mind down to the level of a child's. The decline of life has also its set periods when the brain best suits certain pursuits. If the mind be so dependent on external aid, and this aid be derived from an existence similar to itself, and that the body has not otherwise an influence over it except that its strong passions, when uncontrolled, overwhelm and obscure its very existence, its immateriality is established. "The changes which

the mind undergoes in its activity, its capacity, its mode of operation are matter of constant observation, indeed of every man's experience. Its essence is the same, its fundamental nature is unalterable, it never loses the distinguishing peculiarities which separate it from matter, never acquires any of the properties of the latter." ^(e)

^(e) Lord Brougham's Discourse on Natural Theology, p. 110.

OF THE INFLUENCE OF MATTER ON MIND.

We have stated that a mother's embrace goes beyond mere animal fondness, but, to a casual observer, one feeling only occupies her breast, or is responded by the infant; but as the children who have been denied the care of their species (as Peter the Wild Boy and Caspar Hauser) were imbecile, the character of a mother's affections is obvious, and the dependence of mind on matter in some way ascertained, but what is the nature of the alliance? Lord Brougham remarks that "The developement of the bodily powers appears to affect it (the mind), and so does their decay, but we rather ought to say that, in ordinary cases, its improvement is contemporaneous with the growth of the body, and its decline generally is contemporaneous with that of the body, often after an advanced period of life." This is evidently a constrained admission, as his lordship's argument goes to prove the immateriality of the mind, and therefore the admission is the more important, as showing a difficulty not easily overcome—for, if mind harmonises with matter, and their rise and fall be contemporaneous, it will be difficult to prove the immateriality and independence of mind.

The subject, therefore, claims attention, for no definite opinion can be formed of the capacity until

this subject be made clear. As the senses are the common means of communication with the mind it follows that, as these are more perfect in one individual than another, that the body of one person, in like manner, is better adapted to the mind's operations than that of another, besides this, functional derangement affects the mind, indigestion gives to it a morbid character, drunkenness perverts it, while the temperaments sway it in accordance with their bias; every organ has an influence, and, consequently, the fitness of the body to display the faculties of the mind will be in proportion to its excellence. Infancy and age also display the predominance of the body over the mind, and, to use Lord Brougham's expression, affect it; in the first period nothing is known and little can be acquired, the organization of the brain must first attain a higher perfection, for, as yet, the images presented are imperfect and incorrect—the desires of a child, continued in manhood, bear the character, and if reduced to practice, would be insanity—the nascent and inexperienced faculties are incompetent to their office, and that mind cannot be sound whose elements of thought are not so; nor is the mind less dependent at the other virge of life, age has now robbed the senses of their quickness and the instincts of their power, and, at the same time, memory becomes imperfect, and the philosopher is again the companion of the child, for the body having withered, he who once advised others is unable now to direct himself, and thus he is thrown back from the station he had so ably occupied.

In all these instances it is admitted that the body holds an uncontrouled sway over the mind, and is the body and mind alike material? Does one law govern, one influence direct, one consequence follow, one event terminate their existence? No, it is not thus. The body is possessed by instinct, every faculty and every function is controuled by it, except that of reason, and why is that exempt, but that all besides are in the service of instinct, to preserve the life of the body, and that mind has another office? reason runs counter to instinct, and therefore cannot be under its power, or contributory to the same purpose. Admitting that reason is independent of instinct, it follows that it is independent of the body, and then what power can approach and rob it of its liberty? Strong in its native elements it owes to the body only the materials of its improvement, not the mode, but if those materials are not good its strength is wasted; exiled from its home, and cut off from intercourse with, kindred spirits, out of the grossest materials supplied by the senses it has to form its own character, and determine its own pursuits. Thus circumstanced, it can rise no higher than the material world affords the means: it has no associate of whom to learn of aught beyond itself, save by revelation, and the very fact that the mind can only advance its strength by the contemplation of objects so inferior to itself, is an evidence at once of its humiliation and the greatness of its origin; were there no kindred minds that could hold with him at least occasional intercourse, man would bear in himself an evidence that he was

blasted and driven from the presence of his Maker, to traverse the earth as a spirit, abhorred by all other spirits and abandoned to itself. By spiritual intercourse must not be understood a voluntary or even a conscious interchange of thought, but that secret silent fellowship, that unity which needs no words, which even friendship between mortals, in a degree, admits ; that intercourse which, when the Almighty has a declaration of his will to make to his creatures he employs, and clothes with language—a certain evidence of his merciful regard towards man.

But to return to the subject. It is most evident that the mind is greatly dependent on the body and controuled by it ; it is its degradation, for it has no other school at which to learn, its thoughts relate to matter, and, in its present circumstances, it has no ideas that do not arise from it, all besides is conjecture and fancy and hypothesis, a wild and disordered imagination ; we know nothing of ourselves, but by the properties of matter, they are our constant study, the store-house of our thoughts—but this does not identify matter with mind—an animal has all the knowledge on this subject that man possesses, all the senses can supply is theirs, and so far as this knowledge goes mind is dependent on matter, it rises and falls with it, and participates in all its circumstances and is identified ; the same knowledge is given to instinct and acted upon by it : we cannot know the colour of a flower without the eye, or the sound of the human voice without the ear, the same is true of an animal, it has the same source of information, and was this the whole, did the subject terminate here, the mind could

not exist without the body, the death of the one would be the death of the other, and reason be but the perfection of instinct and an animal but an inferior man. The senses do not continue, and are not renewed at the will of the individual, the impressions conveyed by them are remembered, but memory fails and is gone, and with it passes away all the impressions of sense—thus animal existence terminates with memory, and the body of man becomes as the dust of the valley, but the mind cannot pass away, man thinks, and by this acts asserts its immateriality—he divests ideas of their material dependence, and gives them another character; thought creates, and therefore knows no dependence, ideas are no longer known as facts but as principles, and are seen not as properties of matter but in their relation to the laws that govern matter; and why was a capacity so great bestowed if it be useless? If it requires muscle, and bone, and sinews to maintain its existence, it is not thought; viewed by other intelligent beings matter is beheld as man beholds it, not only in its properties but in its first principles; to see, eye to eye, is equal, mind is not inferred to mind but in degree, and hence a strong evidence is gained of the immateriality of the mind of man.

Admitting the truth of Revelation, this evidence is conclusive, for, if the affairs of man are known to other beings, and they doubtless are, the properties of matter are regarded only as they respect the principle. Man, by aspiring to the same knowledge, cannot have an inferior nature, but what are the effects that matter has on mind? In childhood we have stated that the

body wants maturity and adaptation to the mind, which has every thing to learn ; the mind, at the same time, wants experience, so that, in childhood, while the accession of ideas is great the capacity to judge of their relation to each other is very small, and the after growth of the mind does not correspond with the maturing of the body ; because a child is healthy and vigorous it does not follow that its mind is strong ; let us therefore mark their decline. When the senses begin to lose their energy the communication with the mind is less prompt, and consequently its decision is more tardily given, and, as its determinations are expressed by the senses, they appear less energetic, but no indication is given that the mind has lessened in its capacity, the person, hard of hearing, does not answer promptly, he first collects the words but his judgment is not impaired ; put him to other tests, and if the senses be discovered to have lost their quickness, the mind will not have lost its soundness. Should a subject be proposed which, at a former period, the mind had made its own, and although, afterwards, decrepitude had shattered and worn down the frame, yet if the question be simplified, and a short period given for the mind to apprehend its meaning, its strength will not be found shorn, but the answer will be as in former times : or, if a circumstance of alarm and danger suddenly arises, the mind, by a strong effort, extricates itself, the exertion may increase the feebleness of the body, but it demonstrates its own unbroken energy and shows the weakness to be organic not mental. The body has failed—fear overpowers the body so that it is unable to act, not because

it has lost its capacity, but because its physical life is suspended; its strength is through the senses, its power of showing it is by their energy, consciousness of existence is by the impression of instinct, and as the materials of thought are wholly derived from sensible objects, consciousness must cease when the physical powers are suspended or destroyed—it ceases in sleep, in syncope, and in death, but this is no evidence of the materiality of the mind, but a proof, that only in the ordinary department of its knowledge it is dependent on the body, yet not identified with it, for when deep sleep falleth on man it is still open to impressions, which mark its existence, a fact which by every nation in every age is admitted—call it superstition, it is common to our nature.

It is painfully true that the days of feebleness and age are often characterised by imbecility of mind, for the body may become so enfeebled as not to be its servant, but lives and drags out a wretched physical existence; but, in most cases, the mental feebleness arises from its never having been cultivated, and in age the consequence is apparent—he who ranked with men has ever been in understanding a child—all the brilliancy that lighted his path was animal vivacity, all his intellect memory, for it cannot be concealed that most of the transactions of life are directed by instinct, aided by experience, and formed into habits. To think is a rarer effort than is generally believed, facts, which interest the passions, give to their narration a glow of animation, which acquire the reputation of intellectual energy; but divest the circumstance of its blandishments and it becomes a business of memory,

assisted by the gaiety of the disposition—in age these vanish, and what then is the man. The man of thought and reflection sinks also into decay, he can no longer charm by his wit or entertain by his narrations, his mind has its noon-day strength, but those only have access to it who know its habit of thought—a question presented in an unaccustomed manner is not understood, but if the mode of presenting it be familiar, the subject itself is not forgotten. A person, of a lively and energetic disposition, may pass through the meridian of life with the reputation of being a clever mechanic, and, in the practice of his art, may be competent to instruct and advise, but as his vigor decays his supposed judgment lessens; he never understood the principles of his business, he could imitate and compare, and being well-taught gained reputation, but age has weakened his memory and his reputation is gone. Contrast the Mechanic with the Philosopher and Statesman, and the subject explains itself—the countenance of the one is sunk and vacant, of the other, the eye still beams with intelligence; the character of the one depended on his mechanical skill, of the other on the strength of his judgment; and now age has destroyed the character of the Mechanic, but not of the Philosopher—in both cases the mind has suffered no loss, it is only less accessible from the decay of the senses, its strength remains.

In the preceding remarks, it is admitted that the mind is dependent on the body, but what is the nature of the dependence? Is it not that of a plant upon the soil, which is sustained by it, and has nothing

which is not derived from it but the germ of its existence? But this is the very representative of the grain that was committed to the earth, the soil contributes the materials of its growth, but the life of the plant gives its qualities. Suppose a rational mind bestowed upon a plant, would it be confounded with its physical endowments? Would the fruit of the plant be mistaken for the mind? The senses only, are wanting to the plant, to make it as fit a recipient of mind as an animal. The mind is a stranger even to the body of man, while it inhabits it does not govern, this rests wholly with instinct; the mind cannot cause the developement of a passion, it cannot create hunger or appease it, but is dependent on the organs of sense, for its ideas have a physical origin—but it does not follow that because it receives of another they are identified. The mind of man is evidently debased, nothing is its own, but this does not prevent its existence, its power is concentrated in contemplation, and as it determines it wills, for matter is obedient: but the reverse is never the case, the body never can obtain the consent of the mind to that which is wrong in morals, or false in facts, and thus it shows its independence by its rebuke—they reside in the same body, use the same materials, but their interests are separate, the one is the agent of the other.

OF THE APATHY OF THE FACULTY OF REASON.

The pertinacious resistance given by reason to every effort to enlarge its capacity, is an anomaly in nature ; nothing besides, in the whole range of creation, rejects the appointed means of its improvement, but the mind of man. I ask not why the top-stone of the well-formed human fabric is so imperfect, the fact alone is before us—an Infant may be admitted not to know the worth of reason from inexperience of its influence, but if, after much successful attention has been paid to its cultivation, it is disregarded and discontinued, and if no thirst has been created, no restless impatience imparted by the loss, but that pleasure is felt that a task so irksome is no longer enforced, then it does not will its own benefit or know its own power. In childhood, such is its apathy and thralldom, that it becomes the willing slave of ignorance ; but more than this if a child ceases to improve, it soon becomes incapacitated, and suffers a partial death, palsy seizes upon the mind, and it is benumbed, and senseless—by the stroke it remains through life bereft of its power.

The developement of the physical system is uniformly progressive ; at one year old all children have made about an equal physical progress, at two the same remark holds good, and through every stage up to manhood the body is an index of the age, but it is

not of the mind. Mark its progress: the child, in its first year, evinces its rationality, but not before its sixth, in a feeble way, does it attempt to form its own judgment on some familiar subject, afterwards its progress corresponds to the labour bestowed; but, up to this period, it is governed by instinct, its knowledge is dependent on memory, and its moral agency has not commenced. The mind being thus cradled and nursed by instinct up to the sixth year, opens a field for inquiry; it is the way nature has appointed for the mental germ to concentrate its elements, and gain strength to bear its own developement—a fact of the first importance in education—I repeat the remark, parents impart to their children, from themselves, through the first six years of life, and thus lay the foundation of their future character.

Physical nature has a corresponding process; the seed contains the plant, before it is fitted for the climate it is destined to occupy, and is fostered by the soil. When the mind is sufficiently matured to think, instinct loses its power, and parental influence becomes unnecessary, as a communicating medium through which the necessary impulse to the mind passes. Suppose this period to be disregarded, and that the first six years of life are passed under the care of a cold, ignorant, lazy woman, what will result?—an inactive, orderly, heartless child, who will grow up very prudent but very insensible to every want but his own. A step lower, and those beings the most wretched of our race meet us, and why are they thus?—why can they not exercise the faculty they possess?—why are they reputed idiots and are not so?

I refer to Peter the Wild Boy, and others similarly circumstanced. In their bringing up they passed the period of the reign of instinct with little, if any, of its reflected influence, having had no intercourse with their species, and when again brought under their notice, even before the days of childhood had been fully ended, their minds were closed, and a seal, never to be broken, placed upon them.

Instruction begins in infancy, or it is lost and insufficient through life, no effort changes the capacity after childhood, its standard is then fixed; unless the first stage of its growth takes place, the second cannot commence, the one is essential to the other. The infant mind cannot be taught as at school, it has its own mode of instruction, which cannot be withheld without irreparable loss. Peter the Wild Boy was discovered by George II. when hunting in a forest, in Hanover, who took him under his protection, and he was put under able masters, but he never could be instructed beyond the singing a few tunes; to read, or converse, or even speak the language was beyond his capacity, he could not learn: but he was not an idiot, or he could not have sustained himself in a forest till twelve or fourteen years old, his supposed age when taken, nor did his manners indicate that state. The *Homo Sapiens Finis*, of Linneas, have been found in different countries of Europe—young persons wandering alone in the woods or mountainous regions. To unsophisticated common sense they appear poor half-witted stupid beings, incapable of speech, with faculties very imperfectly developed, and therefore, probably, escaping from, or abandoned by, their parents.—

"Peter, at first, did not like bread, but eagerly peeled green sticks, for the juice, this he did with vegetables, grass, &c. When any thing was offered him to eat, he first smelt of it, and then put it to his mouth, or laid it aside, shaking his head; in the same way he would smell people's hands, and then strike his breast if he was pleased. Wearing shoes, and covering his head, were both unpleasant to him—his hearing and smell were acute—he was never seen to laugh."—*Laurence's Lectures*, p. 107.

Under privations somewhat similar, but not to an equal extent, Caspar Hauser lived till he was about seventeen. He appears, from a very early period of his existence, to have been immured in one dark room; of the period prior to his recollection of circumstances there is no record; he knew little of his species, for his keeper made himself as little known as possible, he was supplied with bread and water while he was asleep, and every precaution was taken by the keeper to prevent his being recognised; he, however, taught Caspar to repeat a few words, so that the voice of his species was not wholly unknown to him, when released from his cell and taken to Nuremberg and abandoned in the streets—his mind was that of infancy, he had scarcely a correct knowledge of any thing, and, for a considerable time after, he believed his pictures and toys animated, and offered them food: great attention was paid to his education, but his mind was, in a great measure, if not entirely, inaccessible; he, however, acquired some social habits, but often cried because he had not seen the world sooner—a pretty clear evidence of an imbecile mind. His

attainments reflect great credit on his teachers, but it is questionable whether his mind acquired any strength or rose beyond a very little child's—in some things he seemed a man, in others an infant; all that wore the aspect of manly sense was probably mere imitation and the force of discipline. His Historian remarks, “In his mind there appears nothing of genius, not even any remarkable talent, what he knows he owes to an obstinately persevering application; all the wild flame of that fiery zeal with which, in the beginning, he seemed anxious to burst open the gates of science, has long since been extinguished. In all things that he undertakes he remains stationary, either at the commencement, or when arrived at mediocrity—without a spark of fancy, incapable of uttering a single pleasantry, or even of understanding a figurative expression, he possesses dry but thoroughly sound common sense; and, with respect to things which directly concerns his person, and which lie within the narrow sphere of his knowledge and experience, he shows an accuracy and an acuteness of judgment, which might shame and confound many a learned pedant. In understanding a man, in knowledge a little child, in many things more ignorant than a child, the whole of his language and demeanour shows often a strongly-contrasted mingling of manly with childish behaviour; with a serious countenance, and in a tone of great importance, he often utters things which, coming from another person of the same age, would be called stupid or silly. He never thinks of a wife, in any other sense than as a housekeeper or as an upper servant, whom a man may keep as long as she

suits him, and may turn away again if she frequently spoils his soup and does not properly mend his shirts." —*Life of Caspar Hauser*, by VON FEUERBACH, p. 135.

These are two striking illustrations of the remark, that unless the reasoning faculties be developed in infancy, they never are developed, but well-authenticated histories of such individuals are, happily, too few to establish the fact; another step onward and more general and equally striking illustrations in the history of our race, of the native apathy and subsequent incapacity of the mind, under some circumstances, to be instructed, present themselves.

The next class are the children of savages. Bene Long, one of the children sent to England by the Governor from New Zealand, received an excellent education and acquired the manners of a gentleman, he appeared even to be gratified by the society of men of taste and science, but, on his return to his native land, his acquirements were evidently unimportant in his own estimation, and availed him nothing in gaining influence with his nation. He had learned much, so as to furnish him with conversation, and he doubtless related many marvellous circumstances to his countrymen; but he was still a Barbarian, nothing he had learned civilized him, for nothing he had to relate was necessary to his happiness, or the object of his ambition to inculcate: he comprehended no principle, so as to apply it to improve or advance the condition of his nation; his dress, in which he apparently delighted, was laid aside for the rude garb of his country, and he died a savage, more vicious, but not more civilized, than his kindred.

Education effected no change, gave him no elevation, his mind early acquired all the impulse his tribe could give, and at that point it stopped for ever; he was too old to reason when brought under instruction—the mind had stagnated. If he had been capable of improvement in England it was by a cottager, rather than by a schoolmaster, a glimmering of light might thus have been caught; but, in a higher station, nothing approximated to his feelings or suited his talents.

The Esquimeaux, when visited by the Moravians, were but little, if at all, superior to the New Zealanders in capacity. The mind of neither was absolutely dormant, nor reduced to the state of the solitary wanderer of the mountain or the forest. The Esquimeaux could form a canoe and surprise a seal, but this comprised the wisdom and the arts of the nation. Several of them accompanied a missionary to England, some of whom died on the passage, or soon after landing, and the others were, in a short time, obliged to be sent back, to prevent a similar event; nothing interested them, or bore up their spirits; in leaving home they left their all—instinct limited their desires to their birth-place, and formed their associations amidst its scenes of sterility and desolation; there dwelling, within a hair's-breadth of death, their affections centred on the spot that yielded some protection—as a sailor clings to a wreck, so an Esquimeaux clings to his cavern of snow, every other position is a grave.

But other circumstances and other scenes afforded no pleasure to the Esquimeaux—unprepared for a change, their undeveloped minds shrunk from the

scenes that were presented to them, and they sunk in despair—nothing made them happy for a moment—no thought flashed across their imagination, giving a promise of future good. To make a foreign country a residence, and to delight in its varied productions, requires an enlarged mind—but it was not thus with an Esquimeax, it is not thus with an European child, whose only place of safety and of comfort is its nurse's arms. The Esquimeaux, cradled in snow, finds this his home. The history of such a nation fills but a single page; a thousand years revolve and no new thought, no desire of change takes place—time to them is a blank, in which the men of one generation are distinguished from those of another only by their individuality—by such every offered improvement is rejected, the mind that refuses instruction cannot learn. But it is unnecessary to multiply instances, every individual illustrates, in himself, the opposition of the mind to an enlargement of its faculties. It is contrary to experience to expect, in an aged person, the aptness that is common to childhood—why is this, but from the state of the body? Caspar Hauser and Peter passed their childhood without instruction, and their minds were closed for ever—the children of the Esquimeaux, before they are six years old, know all their parents can teach, and their minds, resting here, form a barrier which cannot afterwards be passed. This is assumed, because no effort has ever succeeded. The children that have been brought to Europe, especially to Holland, from the Cape of Good Hope, have learned to do many things, but to delight in nothing, or un-

derstand the most obvious principle, and have returned to their tribes, the Hottentots, they left them, and the comforts, and even the dress of an European, not being in accordance with their minds were discarded, while the bed was abandoned for their pillow of stone. Children from the South Sea Islands, from New Zealand, from Madagascar, from the various Aboriginal tribes of America, have received classical educations, but remained, in capacity and in inclination, unchanged. No instance is recorded, in which the tribe has received instruction from any of its members educated with all the skill of European masters; when they return home to teach, they have nothing to impart, they had learned many things but understood none—they felt not that they were greater by the instruction they had received. They learn with sufficient facility so as to keep their station in their class, their memories are good, but their minds had not been enriched by progressive improvement, and now an impenetrable barrier obscures its radiance: they had no thought beyond the strength of infancy—they learned to repeat but not to comprehend.

Had these children been brought up by Europeans, in the presence of their tribe, some progress would have been made in their civilization; the mind of the children would not have been allowed to stagnate, but have extended to the limit of their respective capacities; but the adaptation of the body to certain stages of mental cultivation has not excited the attention it demands. The infant mind cannot struggle for its own existence, it cannot think, and therefore cannot improve itself, and at all times it requires a

powerful motive to make the attempt; but infancy presents only the elements of mind, and opposed to them are all the pleasures of sense, which strengthen every month, and when the mind receives no stimulant, physical gratification constitutes the man.

THE SUBJECT CONTINUED.

But, it may be said, that if the apathy of the mind is shown by the preceding facts, its incapacity is not. The management may have been injudicious, too much may have been attempted, the individuals may not have been well selected, and other like reasons may be urged. To meet these objections other facts might be stated, of the children from every uncivilized country who have received European educations. Those the Dutch have placed under instruction, of the Aborigines of the Cape of Good Hope, retained the mind of Hottentots; those from the South Sea Islands, from New Holland, from Madagascar, and from the American tribes, who have been received into civilized families, and on whom care was bestowed to cultivate their minds, also wanted capacity; no one felt his obligation, or told his countrymen the benefits of science, no one even planted a seed or added an ornament to his dress, or imparted any useful art—having comprehended nothing they enjoyed nothing. Some have been so far educated as to be employed as manufacturers, others have had classical educations, but home, with all its wretchedness, filled their capacity of pleasure and of thought; no new desire, no enlarged enjoyment, no increase of self-complacency rewarded their toil: they learned as animals and enjoyed their pleasures,

and, like them, preferred the desert and the forest, to the society of those who imposed habits upon them, the utility of which they did not comprehend.

But it may be again argued, that such facts are not conclusive, there has been some error—we are therefore driven to another form of evidence. The body has its periods of increase, maturity, and decay, each of which is adapted to certain exercises of the mind ; an infant cannot be taught as a man, nor a man as an infant, the mind of both is cultivated in its correspondence with the age of the body ; a child may be taught mechanically, to give the directions, and to assume the manners of his father, but confine him to the resources of his own mind, and it is found to be that of a child's—he cannot direct. Suppose it not afterwards to be improved—suppose the individual to grow up with an uncultivated capacity, the apprehension and conduct of the man will be very different from that of a boy, although his capacity be not stronger—with the same capacity he pursues different objects, and appears another being, because the body had become susceptible of other impressions and the seat of other passions. Select any other period of life, and impose upon it the mental culture proper to another season—take the meridian—can a matured man return to the feelings of childhood, or realize the decay of age ? The circumstances of the one he has forgotten, and cannot conceive those of the other : his physical system is adapted to carry into force the dictates of his manly mind, and thus he acts—in infancy he depends on his mother's care, in youth he relies on his father's wisdom, but now he reverences both, but obeys neither—he is

set free. The constitution of the body, corresponds to the condition of the mind, and its character is formed by their strength ; when the mind needed instruction, the body was prepared to receive it, when the period of manhood arrived, the mind participated in the vigor of the body ; at a later period of life, the mind loses no part of its wisdom, although the energy of the body is lessened, and the fire of youth extinguished.

The body cannot at one period of life, discharge the functions of another ; the mind that might have been taught in infancy, cannot in age, for the body bears a somewhat similar relation to the mind, that the seasons bear to the productions of the earth—the season of spring, is necessary to that of summer—but if the seed be not sown then, in summer it will be too late and the crop fails. To this the mind corresponds, if it be not invigorated before the season of its activity commences, its spring-time is lost, and the prospect is blighted. While the mother holds an instinctive authority, the child is taught through her medium—it is its spring season—when her influence is withdrawn, another is necessary, if withheld, the mind retains its strength but makes no progress, and after a few years of neglect, if another principle of instruction be applied, difficulties are met which cannot be overcome, and the character is feeble through life. In a civilized country, intercourse gives a constant but secret impulse, which impels the mind, and presents no example of one being, absolutely fixed and unimproveable ; but in uncivilized countries the fact is confirmed to its fullest extent—there the capacity

attains its full strength, even at six a child has the capacity of an adult, the one excelling the other only, in experience and physical strength. If such children reflected as much as an educated European boy, they would improve the condition of their country—a well-trained European lad, eight years old, would, in a wandering tribe, be a philosopher. Take the young Hunter from his tribe at twelve years old, and he defies the power of art to instruct him: when the mother's power had ceased, no other was applied, and the mind became stagnant; the passions grew in strength and formed his character.

The want of improvement in the condition of wandering tribes, after living several generations in the presence of civilized nations, and holding intercourse with them, (as is especially the case in America,) and making no advance in the comforts of life, is an evidence that their minds are unenlightened by what they see in youth—they become too old to learn, and never can be made to relish other habits. What other solution can be given of this strange phenomenon, than the absolute incapacity of the mind to understand its worth: every uncivilized mind, of every country, is, to a greater or less extent, an example of the same general fact—we say of such an adult he is too old to learn—but of an educated person it is not so said, he continues to learn till the instrument of his knowledge is incompetent to its office.

It is unnecessary to advance other evidence on the subject. The apathy of the mind is sufficiently

obvious in the office of the Schoolmaster—its pigmy, withered, stagnant state when neglected in childhood, is evident in every country, but especially in the most uncivilized. It will be urged that an ignorant man may be taught to do many things well—so may an animal, but neither can be taught to think.

OF THE PROGRESSION OF THE MIND.

Bishop Watson amused himself with asking from whom his mind descended, where it existed before he was born, and who he should have been had he not been Mr. Watson? The Bishop was a Philosopher, and ought not to have asked such idle questions. With equal propriety he might have enquired, where had been his life, and who would have possessed it had he not? or he might have indulged his curiosity by asking, where were the chambers of the sun before it shone forth in its splendour? We seek not such knowledge—it is hidden from man—but we ask by what means the mind increases in strength, and in what channels it can be exercised? Neither the functions of the body, nor its own spontaneous efforts aids its elevation; its struggles, when it feels its chains, are only to obviate a present evil, and it again slumbers in its native apathy: the appetites and passions are, at every period of life, ready to burst forth in open warfare to restrain its growth. The mind is cast upon the world destitute and, without a friend; when the means of its improvement are in a measure attempted, generations pass away before any decisive good is observed, and so tasteless is the pursuit, that some other reward than personal gratification, excites the instructor to perseverance. Could he promise

that sugar should be more sweet to the taste, or vinegar more grateful, he would be listened to, but he has no offer to make of which the unlettered adult can estimate the value, or which he can by any effort be brought to enjoy—such is the constitution of the mind. But the cultivation of the senses is a source of delight and of immediate good ; the eye and the ear of the chief of a tribe are acute beyond almost our apprehension, and in civilized life, with the knowledge of the properties of matter, their use is not inferior ; extension and weight and hardness being at once applied to their proper purposes, but the acquisition of an abstract truth is oppressive to every capacity.

Thus the mind is placed under vast disadvantages : it unites with the passions in the possession of the ideas acquired by the senses, by them they are employed as means of gratification, by the mind they are employed in dry if not disgusting efforts.—The rudest nations mark the positions of the stars by their senses ; but Astronomy, as a science, requires a mind so constituted as no system of education could impart to a Barbarian : to inquire into the principles of the government of those orbs, which are the subjects of its power, calls for a mind cultivated through many generations, such a mind acquires a progressive enlargement, a continued hard-earned increase, by that which is of its own nature, truth ; but capacity, when once attained, becomes hereditary—the child of a savage is not as susceptible of high mental attainments, as the son of a philosopher, but more on this subject hereafter.

In a former chapter it was remarked, that a child, up to its sixth year, wholly depends on its parents, that it believes all they say, and, if properly trained, does all they command, and imbibes much of their spirit: after this initiatory state, the mind presents itself for education, and here arises the question how can this be accomplished, so that it shall be strengthened? Mere exercise does not strengthen the mind; falsehood gives it no power, however long and vigorously it may be studied; mere occupation does not invigorate it, for unless some fact be established, some point ascertained, the mind remains as it was. Alchemists and Astrologers had among them many clever men, who studied their respective subjects with profound attention, and unwearied perseverance, but in vain; had they gained mental strength by mental exertions, they would have discovered their own folly in assuming that to be true, which had never been investigated. The laws of nature keep as distinct the species of minerals, as of animals; no transmutation, no changing the relations of matter, no creating an affinity, by which the properties of gold are given to another metal, exist; all error has the same character, and is never food for the mind, investigation and memory may be vigorously employed, and both may be increased, but the mind is not benefited, it has gained nothing.

It is characteristic of the mind that it only receives to itself truth; all it comprehends is permanently added to itself, and becomes that portion of the mind without which another truth, of the same order, could not

be understood. The growth of the mind is not by an expansion, but an accession, not a developement, but an addition, that which it comprehends becomes its strength—for that is mind which truth increases, and prepares for the comprehension of other and more difficult truths. What, then, is mind? Is it any form of matter, has it a material origin or basis, or is it in the likeness of Deity? He is truth. If there be this relation, can man doubt of his origin or his destiny? Man cannot strengthen his mind without approaching nearer to his Maker—by this his responsibility is increased. When Des Cartes was in search of evidence to prove his existence, the fact of the mind's being measured by the truths it comprehends, would have satisfied his every wish—knowledge is power, and power implies existence, but what is vice? Virtue is a quality of mind which harmonises with, and is approved by it, and is an original part of it; virtue is as essentially connected with reason, as truth, for when it is seen by the mind with the same evidence as truth is seen, it becomes part of it, and remains for ever.

A religious discussion is not here called for, the declarations of Revelation are, on this subject, fully and humbly admitted; but, without inquiry into the means by which virtue is obtained, it may be said, that it is not the effect of habit or discipline, but is gained as truth is gained, by seeking for it, and when seen in connection with truth, in its first principles, it is mind; vice, like error, may be attached to the mind, and pursued by it, so as to efface the original principle, which still exists—every attempt to increase the

passions and appetites, to all of which instinct has set the limit, is perverting reason, and supplanting it. A mind, formed by the cultivation of sense, loses its character and becomes depraved ; mind without principle desolates and lays waste, and is at war with itself, its elements are discordant, its strength that of death, if with it there is no remorse, there is absolute disappointment ; such is vice, and when the objects of sense, which the mind pursued, are withdrawn, what remains.

But to pursue the subject. The child who comprehends that two and two are equal to four, cannot yet be taught Algebra, the Multiplication Table is its proper study, and by advancing from rule to rule, at length the most difficult Problems are open to the mind. Mark the progression, for it is applicable to every attempt to understand a subject ; one rule is first mastered, on it another depends, when this is comprehended, another is presented, and thus advancing through the series, they become one whole in the eye of the mind, for every rule contains a truth and the aggregate a principle ; but if one rule be not understood truth is not elicited, and the mind gains nothing by the labour. The Mathematician, in his attempt to include within his mind's horizon the vast machinery of nature, first demonstrates, and makes clear the simplest facts, he is then prepared to investigate another, for every truth admits of being made equally plain, and as ready of comprehension as that two and two are four ; every subject the mind can command has a reference to some principle, which is essentially true, and desirable to know. Its office is to trace facts

and circumstances to their source ; facts, in themselves, belong to the memory and perish with it, but when the mind has grasped a principle, it has added to itself, and directs its actions, not by experience, but by that of which experience is an evidence, by a first principle. Knowledge is then permanent, no fact can arise but its whole bearing is instantly comprehended. Suppose a problem to be proposed to an able Mathematician, he does not hesitate, but gives the solution ; or suppose, in common life, a question be asked on a subject well understood, the answer is prompt as in ordinary conversation ; on this principle, the mind is always ready to answer when its knowledge is complete on the subject of inquiry.

There are first principles in morals, and first principles in nature, for the mind to grapple with as lessons, and make its own, but its progress is necessarily slow. The physical system must first arrive at a given point of maturity, then the passions be under discipline, and the mind free from an insane bias. This circumstance being granted, the mind is open to instruction, and prepared for growth, and its destiny, in a great measure, rests with its parents, they being as responsible for the character of their children, as the Jewish priests were for that of their nation. To make hasty conclusions, by stepping over a good portion of intermediate knowledge, is productive of error, and ought never to be attempted, and error seeks the co-operation of the passions, truth avoids them, and thus their respective influences are made evident : truth is greater in its own unaided power, but vice is allied to passion, and shows its fatal

effects on the character of the mind—if truth be not attained, the mind becomes the dupe of the senses, and identifies itself with them, and they form the habit of thought ; but although thus enslaved, that which it had attained of first principles is never obliterated. Passion makes the Bigot in religion or in politics, for they are but one character, unkind towards his neighbour, because he does not think and feel in the same manner, when inflamed by opposition it pushes on the dominant party to inflict death, without a feeling of pity or a pang of remorse ; but reverse the case, let the bigot be the victim, and he appeals to the first principles which his passions had trampled on, and sees that the man who perpetrates the deed is a murderer. In savage tribes, where the first principles of right and wrong are not comprehended, the victim dies, boasting that it would have been his highest happiness to have inflicted like torments on his enemies. Such is the mind perverted by error, or wholly untaught—so long as passion and error forms the mind, and constitutes its power, its progress must be in opposition to truth, and its consequence what ? The moral and mental capacities, forming a character not founded on truth, creates one opposed to it, and which, from the experience of every age, is found to be its enemy, ever prompt to oppose its progress and destroy its power ; this, when carried to its full extent, converts man into a fiend, but truth, however limited, when made the rule of action, gives weight and confidence to the character.

The progress of knowledge is that of a chain, every link of which receives strength from the one below

and gives to that above itself—if one link be broken it is no longer a chain. It is thus with the mind, if one link be wanting the whole is confused; every science, and every approach to first principles, requires, that every step of the ascent be carefully taken, for the mind, in comprehending a truth, takes in all its parts, and sees them sufficient to establish the principle to which they relate, and by this one act it attains in dignity, and in strength, and in power.

THE SUBJECT CONTINUED.

To comprehend a truth is to see eye to eye with the Creator, for truth bears but one aspect, admits of but one construction, and is necessarily the same to all minds. To see as the Deity sees, is to partake with him, to be like him, and to be capacitated to hold communion with him. Does man apprehend any subject, as it is apprehended by the Deity, then what can extinguish the capacity, why should it cease with man, if not with other intelligencies? Nothing that absolutely depends on matter can be thus circumstanced. Mind is the capacity of knowing first principles, which is the consummation of knowledge; but although the capacity be inherent, a subject must be studied to be understood, the mind must be cultivated as mind: a superficial cultivation, one which rests on the accumulation of facts, and not on the understanding of principles, has but little influence or value, such knowledge makes a pleasant and an instructive companion, but the mind is weak where its knowledge is dependent on the animal system, and where memory is its chief ally: mind does not enlarge by a technical memory; the result of thought, not the means by which it is exercised, rests with the mind, memory recapitulates all the facts as often as the subject is introduced; the mind knows the result without the

facts, when the principle is understood. Should a young philosopher read all that has been written on any subject he may be studying, he would acquire much information that would avail him little, as no test by which to try its truth is possessed by him; but when a book is read by one who is master of the science of which it treats, its errors and its truths are conspicuous, the one accords with the principles of the science, the other not.

Astrologers, in common with other philosophers, studied carefully, and thought with intenseness, but gained nothing, because they were guided by supposed facts and opinions, not principles—they assumed facts without referring them to principles. Ask a philosopher the ground of his objections to a reputed theory, he answers because it is not in accordance with the law of nature; his mind, imbued with the principle, did not require the course of facts and inductions he had once studied—it was the principle being known, that suggested the result. The youth who studies Newton, and Dalton, as they require to be studied, will, at length, attain a knowledge of Astronomy and Chemistry, and when attained, the intermediate steps are forgotten, but the principle is retained—mind sees principles, memory is confined to circumstances.

This power of comprehending is accessible in infancy, through instinct, without language or sentiment; afterwards, parental direction checks the power of instinct, by interposing its own, and thus the mind receives its early strength by cultivation: and is able by itself to contend with instinct for the mastery, and to go on in the search of truth; of that which cannot

change, which is in its own likeness, and which is essentially perfect and indestructible. Falsehood and error are the bane of the mind. The progress of science they arrest, and palsy the efforts of the strongest powers. The history of science, is that of the mind's conflict with error. Probably no subject has excited such long and bitter controversies as Metaphysics; that such a subject should divide nations, and almost draw the sword, admits of no other remark than its being an illustration of the effects of error; on the other hand, truth leads onward, illuminating its own path, and leaving way-marks by which others may follow: it cannot excite disputes or controversies, it demonstrates facts, and from them a new ray of celestial light falls on the mind, it is followed, and again it shines, and where can it stop?—it goes onward.

An enlightened mind is too well satisfied with itself to be, like an angry bigot, arrogant of its own attainments; error grasps at a shadow; a maniac studies a subject with incredible intenseness, but it increases his malady; but a wise man searches for truth and submits to it, as a parent he anticipates the character of his child, for education is consequent on man's condition, it is an ordinance of nature, an appointment of the Creator's for his benefit, and therefore its end is definite and certain—it cannot have an accidental result. A sound education will produce sound sense; we contend not against exceptions, there are such, many silly men have been at College; but we do assert, that neither ignorance nor error are essential to the mind, both may be removed, that sound principles and just sentiments may be inculcated. We

state this with confidence, because reason is essentially perfect, and may, in all, be increased, and its perfection holds a high and an essential place in the destiny of man : it is a fearful fact, that if reason be essentially perfect it cannot pass away—no portion of it can pass away and perish—the mind cannot forget, but is necessarily retentive of all it acquires—to forget implies defect. Ideas and thoughts, with all the knowledge connected with physical life, will pass away and be forgotten, the mind had not embraced them ; they, like the feelings and pursuits of infancy and childhood, perish from the mind, with all the charms of sense, in after life, and are gone for ever. The instincts of infancy cannot be retraced at a later period of life, and at death all that relates to physical existence, all that connects man with the external world, and that depends on memory, close in oblivion ; they have answered the end of their creation, they have stamped their character on the mind, and are no more. Could the mind exist with a recollection of all the circumstances of life, it might recount the events and forget itself ; but a mind constituted and formed by truth—a mind of principles, not of facts—is destined to live in their exercise : all the mind possesses, all that constitutes it mind, it must acquire, save the germ of its existence ; if avarice has formed the mind, and it be disappointed in its purpose, then physical nature cannot sustain the loss, and the mind goes on to madness—but if truth, in its simplicity, and divested of passion, forms the mind, it thirsts for other truths, and must, from its own nature, be acces-

sible to them, and can such a mind cease and be blotted from the universe?

The morning of life has the sole direction of the character. This view of the mind heightens the importance of this period of our existence, an importance which no other possesses. The Will decides from the impressions of the moment, and the reason from their consequences—the will accords with the passions, and, when unchecked, forms a character of deep depravity; reason stays the passions, and aids in forming a useful character. The will, urging forward the feelings of instinct beyond their prescribed boundary, breaks down all other restraints, assumes the direction, and the seat of reason becomes the sepulchre of its character—an unrestrained will, is the pander of a vitiated and injurious life. The will gives expression to the desires of the heart, and depraves the mind; he is happy who wills to do that which is right, and happy are those parents who unite their influences with their responsibility, in conforming the will of their children to their duty.

We have stated that the faculty of reason is perfect, of this its capacity to know good from evil, virtue from vice, are further evidences. These the will does not distinguish; it is insensible to shame, conscience does not controul it, for it acknowledges none of its power, discipline restrains and reason commands its own, but the will is inexorable. The criminal who has imbuéd his hand in the blood of his neighbour, never feels remorse, he cannot feel remorse, how can remorse be felt where reason has no influence?

The capacity that knows the worth and tastes the sweets of virtue enforces its practice ; conscience, that highest attribute of reason, is its shield, at the same time it is the antagonist of the Will. This attribute claims some notice. The truths of nature are demonstrable, but the tests of conscience require to be recognised and approved by the mind, and confirmed by Revelation, to constitute them such ; even with the aid thus given to virtue, it is not of equal strength with the determined malignancy of its opponent : the Will, being in alliance with conscience, reason is an evidence of their common nature, and a pledge of their future triumph. That reason is not now of equal strength with the will, although perfect in itself, arises from their different relations to the body ; reason is restrained by the inaptitude of the physical system, but the will finds in the passions the instruments of its power. The exercise of conscience refers to the future ; present desires are restrained from an apprehension of their consequences, the will therefore, is susceptible of restraint—were the future not as certain to the mind as the present, the influence of conscience would cease, and its power be gone, and the will triumph over what remains of virtue. The mind ever dwells on the more, or less distant future, and without such a confident belief and motive to action, conscience would be a punishment, for where would be its utility or its power, or how could the distinction of good and evil be understood ?—this desire of the future is no small evidence of its capacity to enjoy it.

But it may be objected, that conscience is the creature of circumstances, that education fixes its

limits and determines its operations, hence the Ethics of one country are not those of another, consequently it has no standard. The virtues and vices of a barbarian are not those of a civilised nation, granted ; but their character is the same. With most uncivilised nations Theft is not a crime, but in a few instances it has been so esteemed ; the same remark holds true of many other vices, they bear this character by common consent, for, if not deemed injurious, they are not thought criminal ; but character has a universal law, alike impressed on the hearts of the refined and the savage nation, on the king and on the beggar—this command, “Do unto others, as ye would that others should do unto you,” is the law of conscience—the great, the common law of man, and no one disowns the obligation : all legislators have made it the basis of their respective codes, but no one has followed its principles through the labyrinth of human actions. Its author alone can legislate for conscience, or adjust laws to the highest state of excellence, and perfection, to which the mind of man can attain. Christ’s Sermon on the Mount contains the code of a period, the world has never yet seen ; not one of his injunctions is inapplicable to man, or opposed to his reason, or unworthy its author, or requires more than ought to be rendered.

Were other evidence requisite to establish the Divine Authority of the Scriptures, this Sermon supplies it. No man could cast forward his thought and devise such a code, so accordant with reason, yet so opposed to the depravity of the will. Reason cannot change, for that which is true, cannot be made otherwise—

reason is ever the same, but the will yields to influence : it may be subdued, it may be changed, it cannot always reign over man, but give place to reason and conscience, which alike proclaim justice as the universal law of nature. Another evidence of the essential perfection of reason, is its incapacity to acquire knowledge that is not beneficial ; by knowledge is not meant the ideas that instinct supplies, which feed and sustain the passions, and which animals possess, but that which takes from the Indian the scalping knife and gives in exchange the ploughshare—that which gives domestic comfort and personal character to the peasant, and to every order of society its distinction—that which creates the criminal blush on the cheek of guilt, or the tranquil smile on that of innocence. Truth cannot vitiate itself, for all truth leads up to some first principle in nature, which is perfect, and which, when known, becomes its ornament and its power.

But passion, Dr. Reid remarks, is stronger than reason. But what is its strength ?—is it not from the neglect of discipline ? Passion is no part of mind, and therefore its government is usurped—every passion may be so subdued as scarcely to appear to exist ; for if one has been all may. It is admitted, that while literature robs vice of its grossness, it does not diminish its energy ; that the erudite mind is sometimes associated with passions the most rank and noisome, but still the position is maintained, that the mind cannot by study debase itself. The vicious man of letters suffers his will to command his judgment ; the man that betrays his friend may be intelligent, but

his understanding did not approve the act: ingratitude admits of no justification, reason is unable to ascertain the elements of ingratitude, or conceive of gratification in the habits of any vice, except by experience ; reason cannot be exercised upon the subject, so as to comprehend it as a principle, it is no principle, and cannot form an integral part of any mind, or be its proper occupation ; its seat is the will, its operation is by the instinct, error falls from the mind by the discovery of truth, when the mind has detected vice it is abhorred, the mind sees itself defiled—to obtain these results reason must be exercised, and its increase will aid the destruction of vice.

THE SUBJECT CONTINUED.

But another question arises—Is not a specific organization requisite for certain operations of the mind, and is it not so connected with matter as to partake of its imperfections? Certainly not. Whatever belongs to physical life requires a specific structure, but the mind is not so circumstanced, the limbs are appropriate to motion and the temperaments to the disposition, all that is connected with the body is influenced by it, but its influence on the mind is distinct from its influence on the passions, their dependence is absolute; a divided nerve has lost its strength, and its influence is gone, but if all were paralised and insensible, the mind would not sustain an injury, voluntary motion receives its power from muscular sensibility, but the mind gives no aid to the body, it neither assists its growth nor hastens its decay, it controls no function, it interrupts no process; health and sickness, strength and feebleness, are independent of the mind—it can neither appoint or prevent. No common influence identifies the body with the mind, they are not one, but it will be said the mind requires a specific organization, granted; it is essential to the acquisition of ideas, but not to their use: when the mind has attained them they become its own, and, like the

conscience and the will, it points to no particular part of any organ as their seat.

The mind, in the act of thinking, requires only the ideas relating to the subject, and that it be not interrupted by the body, sleep is an interruption, by suspending consciousness; intense thought destroys the sense, and time and space both change unperceived: as the body is the medium through which the mind acts, sensibility is necessary to the execution of its purposes—it cannot direct a lifeless body, or a mind absorbed in thought. But, if its communication with bodies like its own be through the medium of the senses, it does not follow that the senses are essential to thought, or that the mind can hold no intercourse independent of them. Which of the senses does it employ in forming its conclusions? having discharged their office their power ceases, and the mind and body hold the same relation they did in infancy. What was that relation? The mind existed, but it was unknown to the body and formed no necessary part of its being; the mind thus unimportant to the body in infancy, cannot be more so at another period, and, if the body be independent, what can make the mind not so? all relations are mutual. If the mind be not essential to the body, how can the body be essential to the mind, there being no alliance, no communication, but that which relates to the properties of matter? The relation, therefore, stands thus:—In infancy the mind exists, and would continue to do so, without its being exercised on itself, for it receives no strength from physical nature. In infancy the body is but

the residence in which the mind learns, but to which it does not render any direct assistance, and there does not appear to be any period when the relation changes.

Much attention has been drawn to the mind on the subject of Phrenology, it therefore claims our notice ; as yet nothing has been established, it being uncertain whether there be not as many exceptions as illustrations to the assigned character of any given organ ; but the subject should not be abandoned, for some important preliminary facts are admitted to be true, and such as have a practical bearing. The cultivation of the senses, and thus rendering more quick the apprehensions of instinct, influences the symmetry of all animals—the wild differ from the domestic in every limb and in the form of the head—the wild boar is at once distinguished from the domestic hog, and who can point out the original dog or barn-door fowl ? The climate and the country have also an influence on the figure of the animals ; a hilly country and a mild climate form very different, and far more perfect forms, than a hot or cold, but flat country : a hilly country imposes the carriage, and fixes the centre of gravity high up the back, between the shoulders, the limbs, in such a case, are always light, the figure good, and the walk as graceful as a Spaniard's ; but, in a flat country, no circumstance demands attention to the attitude, the centre of gravity is low down the back, as when a load is carried on the shoulders, and the limbs are not elegantly formed. There is another circumstance that has a powerful influence on the form of the head—its position upon the neck and shoulders. When the head is so situated, that its

weight bears equal in all directions, it is globular, like a Chinese, in such instances the limbs are round and elegantly turned ; but when the head is fixed as a negro's, the weight preponderates backward, the head is then always inclined in that direction, which elevates the face, the limbs of such are thin, and by no means elegant—on the other hand, the Calmuc Tartars head predonderates forward, and the Tartars legs are thick, and their whole frames clumsy.⁽⁹⁾

These remarks are characteristic of nations, but verified in other individuals—ascertain the position of the head, and not only its form is ascertained but that of the whole body. The rickets, and other diseases, also affect the form of the head, and, therefore, in the study of Phrenology, physical causes should have their due consideration. There is yet another question demanding the attention of the Phrenologist, in ascribing to portions of the brain specific capacities. Mr. Jordan, a distinguished surgeon, gives me leave to state that he opened the head of a person, a few hours after death, who had given rational answers to questions up to a few hours of his death, and had at no time been incoherent, but whose brain was dissolved almost to a state of fluidity. Other instances might be mentioned, but the fact is established in the experience of every anatomist. No part of the brain has escaped at least a partial decomposition, without destroying the powers of the mind—its dependence therefore on the brain is not absolute.

(9) Dr. Camper "De Vari Humanorum."

But if Phrenology be not established as a science, it must be admitted that dispositions of a mental, as well as of a physical nature, may be known by the form of the skull. Idiocy is known—insanity, in some of its kinds, is also known; and a certain nervous sensibility has also its characteristic form. These are indicated by a preternatural growth, or by a deficiency of substance. As a defective state of the mind has its characteristic form of the skull, it may be inquired how far a more distinct and perfect developement contributes to particular dispositions, and disposes to the study of particular sciences? Hitherto little progress has been made, or due caution in forming conclusions observed—one instance may be quoted, a large cerebellum is supposed to be the seat of certain dispositions of the mind; is it not rather an indication of a robust constitution? The subject is thus fairly dealt with, and if it had any weight in the present argument it would have occupied a larger space.

OF THE PRACTICAL USES OF REASON.

The veil that conceals the laws of nature was not withdrawn, when the darkness was dispelled from chaos, or man, without an effort, would have attained the extent of knowledge his capacity is fitted to sustain, but a far higher dignity awaited him, he received the gift of reason in its rudimental form, to cultivate and qualify for use, and unaided to supply its energies and illustrate its power—the mind has no path but in itself—when exercised upon itself it grows, and being well supplied with ideas, and compelled to use them, it advances more rapidly; but withhold all impulse and it makes no advance. Reason was not given to be obeyed as a law, but to be exercised and improved as a faculty, before it the Book of Nature is opened, and thus the Creator shew his alliance with man, whom he teaches, as a parent, the mode of his operations, and if Natural Theology were to be taught and inculcated, here is its foundation and its source: a gift has been bestowed by the parent of man, in making known to him the laws by which he produced order out of confusion, and subdued the power of chaos. Such a gift is well calculated to inspire gratitude, and gratitude towards the Creator is adoration; but Natural Theology is eclipsed by Revelation, and therefore we pass it by. Ages have rolled away, and but a portion of

it by. Ages have rolled away, and but a portion of this book has been read ; the mind has not yet attained an adequate capacity, but enough is known to anticipate that all will be understood. Metaphysicians long since commenced the study, but they pursued a wrong track, and the knowledge which has been gained has been without their assistance. The better to direct their studies, they attempted to analyze the mind, and to ascertain its seat ; but the path they trod led them back to the point from whence they set out.

There needs no stronger evidence of the character and power of reason than its being left to itself, it thus shows an independence which defies destruction, and so lives in itself as only to know that which is its like ; by its exercise it creates new desires and originates new wants, and supplies them by its own devices : for the use of instinct all is provided, not a sense is ungratified, or a desire unsupplied ; to the animal every thing is given, but the hand of the Giver is shut towards man—He receives little from his hands. Having endowed him with reason He resigned him to its direction ; while He feeds and clothes and guards the helpless lamb, He gives to man only the means of providing his own supply, one gift only has been bestowed in a state fit for his use, and this is indeed of inestimable value—it is the gift of water—the spring rises in the valley for his use, but the valley itself brings forth briars and thorns ; that other gift to which the Book of Nature is open is equal to his wants, but it is the measure of his capacity, when this book is understood it will be closed, and man can know no more.

By this first essay of the mind, it is gladdened and enraptured with the prospects it unfolds ; besides this book, man knows nothing but in common with the mere animal : but mark the result of his study to his present condition, he has indeed not subdued the elements, but he has broken up the waste, and clothed it with fertility and beauty—he has assumed the right, and all animals submit to him—he governs by the power his mind has gained ; but the sweat of the brow is his, for the acrid berry, and the meagre grain the wild grasses yield, are food fit only to sustain the birds : the plough-share and the spade must pass over the land, or man, with a cultivated mind, would perish on its bosom, or his numbers be extremely limited. All that has been given to man is in an incomplete state, and it rests with him to form it to his use. Before the mind has acquired strength to commence the process of civilization, the condition of man is that of an animal ; who but an Esquimeaux would make a repast of the putrid blood of a Seal, and what animal but man, having destroyed its antagonist, eats of its flesh ? Carnivorous animals devour their prey, but these are not antagonists, perhaps no animals eat their own species but of necessity—all that has been given to man is to be enriched and cultivated.

Such is the power of his intellect, such the trust reposed in him, that he needs but the means in order to accomplish the end ; and is such a being to pass away without a memorial to record his existence ? Is the mind to close upon its own acquirements and efface them, and be annihilated ? for forgetfulness is

annihilation. This independent, this improveable faculty, this power of thought, cannot pass away, or be stricken with death, it must and it will live for ever, with the knowledge of all the truths it has acquired, and all of moral good or evil it has identified with itself—its present capacity is a pledge of the future.

But the mind that is able to do so much, is impeded by the Will, hence the people of every condition demand higher cultivation—the savage thinks meanly of the man who covers himself with a garment, and he who builds an house, and furnishes it with a bed, is despised as effeminate ; an aversion to the toil of improvement sits as an incubus on the mind, but when compelled to exercise itself, new prospects open, and new desires arise—every advance of mind places man in the midst of a new scenery, and increases the comforts of life. A shepherd enjoys his cottage, while a man of more refinement requires a different dwelling : with an advance of the mind, there is an advanced capacity of tasting the sweets and the bitters of life ; that is not effeminacy, or ostentation, which decorates a dwelling, and lays out the grounds, and provides suitable domestics ; the mind may be brought to harmonise with such accommodations, and to identify them with its comfort—the mind is ever in search of happiness as a right, and the conveniences of life form part of it. Civilization advances with the mind, and every step changes the relative value of things ; the habit of one stage of civilization is incongruous at another, even some of the habits of the illiterate are vices in the refined.

The mind rises, and acquires elevation as events are felt ; such feelings are its natural stimulus, for desire of change precedes the effort to obtain it. The hut and the cavern become unpleasant, before the mind can be roused to make an improvement, and meet existing wants. God has given man reason, that they may be supplied in the same bountiful way as he has supplied the wants of animals ; having open before him the Book of Nature, to imitate, and thereby to increase his stores, he labors for himself, for the labor of his hands are his own, he sows and reaps the harvest—reason is the sceptre he extends over his wants, and they become the foundation of his power, and the means of its increase. Reason accords with the wants of man, and is an index by which to know them ; a sense of decency and utility regulates his dress, even the beard is not sacrificed to caprice, but gives way to the progress of civilization, when the habits of life render it no longer useful, it ceases to be ornamental, and then becomes vulgar ; similar remarks are applicable to the hair. Civilization observes a steady course, producing similar effects in every region of the earth.

But knowledge can rise no higher than its source, being derived from objects of sense it must relate to them—all that man can do, is to keep pace with his physical wants, as they increase and refine by the accession of knowledge. No mind can penetrate the darkness that envelopes the sepulchre ; science is silent here, and on every other subject not open to man, by studying the only book from which he can

learn by his own teaching, the Book of Nature. Still a desire to know the secrets of the grave is equally felt by the educated and the illiterate, and although the progress of knowledge will not unfold them, yet, as a natural desire, a provision is doubtless made for its gratification, in common with all other such desires. The book, or, more correctly, the laws of nature, which are given man to study, and from which all that his capacity can comprehend is derived, calls for labor : ages pass away in the pursuit of a single science, and in the first attempt to practice even an art, reason is inferior to instinct—the bird builds its nest, and the bee forms its comb with skill, but the rude huts of a wandering tribe do no credit to their instinct or reason : it is by the light of science, the stately palace rises in the just proportions of nature, and gratifies the chastened feelings of the mind ; strength combines with lightness, beauty with utility, and thus the book of man's instruction has in part been read.

The laws by which the earth rose into beauty, and commenced its course in harmony with other planets, under similar influence, are placed within the comprehension of the mind : we witness the rising and the setting sun, the waxing and the waning moon, and are not satisfied. We ask the cause, and discover it in the catalogue of our possible attainments. When man has become acquainted with the Phenomena presented by the natural universe, within the command of his senses, he will have reached the summit of his wisdom, and the book will be closed ; other

faculties must be given before other subjects can be comprehended—the book of instruction is limited to the laws of matter. Man never, as an inhabitant of the earth, can know more than this, he can recollect facts and they become history, he may refine his language and beautify his style, and as he civilizes he will do so, but he can give the mind no accession of strength. A knowledge of the method by which the great Author of Being governs this earth is the sum of our attainments; we look in vain for other sources of light. Already much has been attained; Mathematics, or the law of form, and Chemistry, the law of affinity, are now known in their first or elementary principles, sufficiently for all practical purposes, and probably to the extent of man's capacity.

Other laws wait investigation, as the law of the Atmosphere, and the law of the Mind. These, with Instinct, comprise all that relate to the immediate government of the world, and are all, so far as is known, that are proper to the government of physical nature; other, but unknown laws, govern other planets, which may properly be considered as local.

From the laws of nature the sciences are derived, and attached to them are the arts; from Mathematics Architecture and Astronomy; by the law of affinities various arts, as those of the bleacher and printer, become sciences, and are taught on their respective principles; the law of the Atmosphere and the Mind are receiving attention, and the capacity will probably soon acquire strength to comprehend them. What will follow is conjecture; but probably the mind will

be prepared for higher forms of virtue, holiness, and truth ; and war and bigotry, and misrule will cease.

But if the subjects of man's contemplation are thus limited, his capacity is prepared to go beyond them, and enter on new studies. What that other book will be that shall be presented before him no distant glance has been afforded, but the first may be received as a pledge of a second, or where is its utility ? Besides, it may be inferred, that the principle which can rise from the imbecility of infancy, and acquire strength to comprehend the laws of the universe, can advance onward ; to be stationary, supposes inactivity, not inability—to turn back is to deny the existence of mind ; onward, before the mind are other truths, to the attainment of which, its present acquisitions are a preparation, or they are a delusion and a mockery. Instinct can alone make this earth a paradise, because it alone can command its pleasures, and limit the desires to the means of their gratification.—Instinct, consequently, if the tomb embraces the mind, is the only desirable good, for reason advances no individual above care and sorrow, as instinct does ; but on what principle can the mind that thinks, and has been instructed into the first principles of nature, be forsaken by its author, and forgotten by the intelligences of the universe ?

It may be said that appearances favour the belief, that man may continue to inhabit the earth through successive generations for ever, adding, from time to time, fresh discoveries in nature to increase

the amount of his happiness; this expectation is vain, for the earth cannot be eternal: the mountain torrent, and the swollen river, bearing to the ocean continued portions of the earth's surface, is an evidence that its duration is determined: by the mass of sand yearly deposited at the bottom of the ocean, the water is displaced and elevates its surface. The various tribes of insects also, by decomposing the water of the sea, and causing a new combination of its elements, form coral, the immense masses of which, rising like mountains in the deep, contract its space, and force its waters more to the margin of its banks; for unless the water of the ocean diminishes, it must be displaced by the various substances continually being deposited within it, and must inroach upon the land, and in time the now fathomless bottom of the ocean will be filled with the wreck of the continents. Already the Baltic, and other narrow seas, shew the truth of the remark, the water not reaching the depth it did a hundred years ago, by several inches. To stand on the margin of a turbid river while it empties itself into the sea, is to bear witness to its limited duration—a continual addition to one part, at the expense of another, must produce a level.—Then why was the world created? is it a vain effort of its Maker's power? If, from some cause, the Earth must perish, will the knowledge of its laws perish also, and with them the sciences, which are the full measure of the capacity of the mind of man to comprehend, and which will cost him little less than the full period of the world's

duration to obtain, are these also to be forgotten? Then why are they permitted to be known? If they made man happier than the brute, a motive would be presented for his laborious inquiries, but he is not happier,—they know not that they are mortal, till they are dead; but man's mortality counterbalances his power, and disturbs his thoughts.

To attain knowledge so sublime, so God-like as of the laws of nature, is to obtain a rank among intelligent beings, which can not be effaced without a blot in the universe; for what is a science, but a law of nature submitted to the strength, and wielded by the arm of man: he cannot command and be obeyed, but he can accommodate, and use the description of power by which the Creator formed the world, to supply his acquired and natural wants.

Science, where Revelation ceases to instruct, is man's sure resting-place—it is his own, and nothing besides is his—it is the fruit of his mind's hard labour, and it has become his mind's identity. Reason was bestowed to be employed on the works of nature, that man might learn to fertilize and beautify the earth, given to him barren and unsightly, and render it a fit habitation for a cultivated mind. Man cannot command and be obeyed, but he can decompose the elements, already united in a solid substance; he can decompose the air, the earth, the water, and from this new chaos bring forth new forms of matter, and generate other properties. Ask the Chemist why he mixes a solution of acetate of lead with that of the sulphate of zinc, and he will say to produce a double decomposition, from which new compounds will form, and

new properties be acquired. No mind that has not made advances in the knowledge of truth, can comprehend so simple a fact—that which knows little may know more—it is not the extent of the knowledge man can acquire that constitutes his greatness, but the capacity to understand any truth characterises mind, and is itself its elevation.

One of the more obvious uses derived from reason is civilization : it needs not now be traced in its progress, but the circumstances it occasions are met and overcome by the cause that originated them, and, by the enlargement of the mind, its wants that are felt are supplied. This is one use of reason ; another is the confidence it creates in the wisdom, and goodness, and prescience of the Creator : the man that understands one law, credits the existence of another that is connected with it, and believes the author when he declares another fact in accordance with it, but which does not admit of demonstration—thus much credence is daily and justly exercised, unless the will interposes and prevents, for the will, not the reason, is the parent of deception.

But we may return to the laws of nature, and strengthen our belief that we are not permitted to study them without a design worthy their author. Do we see the planets, with unspeakable majesty move through space, and the earthquake, with terrific power rend the mountain, and the tempest, as it passes along lay waste the fruits of the earth ? and do we know the cause, and can we, in a limited way, apply the power and imitate operations so wonderful ? and is the agent that can do this nothing ? Is it not to

live? and has the mind a jurisdiction equal to its capacity? and will this be taken away? Animals are not instructed, but governed, instinct prescribes their actions, and they never pass from beneath its power: a law governs them, but reason governs man; the commands of his Maker are those of reason, and his obedience is in conformity to its requirements. Revelation is founded on reason, and accords with the desires and wants of those it is designed to benefit—reason approves of that which is good, but the will is evil, and calls for demonstration where it is unnecessary or impossible, and would not satisfy—reason clings to immortality as its birth-right, but the will must be changed to enjoy its light. Revelation is the study of reason, not as the laws of nature, to demonstrate and make evident, but to credit and practice, and by its adaptation to the mind, to form its character and receive its happiness.

OF THE SCIENCES.

At an early period we read of metals being wrought, of garments being woven, and of habitations being erected, suggested by the accidents of life, and handed down to succeeding generations as arts. At length Greece led the way to a knowledge of the sciences by the discovery of a law of nature ; by which one single act, she elevated the condition of man, and placed herself foremost among the nations, and ever will retain her well-earned and dignified pre-eminence. Barbarians have trampled down her soil, but her laurels have not faded. She is Greece. She, it is to whom the world is indebted for the permanency of its civilization, and its greatness ; on the birth-day of science, which she alone can celebrate, man advanced the first step in the knowledge of his Maker, by the exercise of his understanding, and made immediate Revelation less necessary. Arts pass away, for when they cease to be practised they are forgotten ; but science gives to them stability, and to a nation security and honor—of the fairest page of its history it is the ornament. That nation is great who cultivates a science, but that is greater who led to its discovery.

In a preceding chapter, it was stated that the laws of nature are the study of man, the school at which

he can be taught ; in them is concealed that knowledge which is at once the exclusive food of the mind, and the stay of physical nature. Man's capacity is fitted to receive such knowledge ; when he deviates from this track, and seeks in other channels to increase his mental store, at the first step he is immersed in darkness—his only subject, that alone to which his capacity is adapted, is nature, that which surrounds him, and which his senses apprehend. No truth can be established without facts, and no fact can be established without evidence, and none can be gained but by the senses, and these are all of nature : no eye can reach beyond the horizon, but within its circle it grasps the scenery, itself the centre, whence each portion seems to radiate ; science has its horizon, within that space all is the mind's, it traces out its parts, arranges and compares them, and at the point at which they meet and harmonize, it discovers a controlling power, which is the law of their government ; of other forms and states of matter the mind has no conjecture, for it is of the globe alone that it can learn

Some Astronomers, stepping out of their way, have professed to discover the same elements in the moon as constitutes the earth, volcanic mountains have passed before them, and other optical conjectures may pass in review. Conjecture is founded in comparison, that which is supposed bears a resemblance to something that is known ; hence our conceits of the material substance of the planets, and stars, and comets, is copied from the earth we inhabit, as matter in no other state has been seen by us,

we fancy none to exist : but other forms, under other laws, may be the source of other sciences, which doubtless impress their character, and distinguish those who practice them.

The sciences which are proper to our globe, and on which the mind is exercised, form that mind ; the extent of its study is but a speck, a point in the Creation, but to realise the knowledge that may be elicited from so small a source, requires a gigantic effort. Man enters his field of labour not so much ashamed of his ignorance, as an obligation laid upon him to live by the labour of his hands ; he appeals to the sciences, and by their aid reaps a full supply for all his wants ; but the obligation to labour is not withdrawn, and he hates its yoke and accumulates wealth to be released from it. The sweat of the brow cannot be divested of its disgrace—it is more, it is a curse—or man would be fed to the full without his toil. The form of labour may be changed, but its character cannot ; the ignorance of the mind is not as galling as the labour of the body, but a greater degradation ; and when its character is properly apprehended, its energies, in like manner, will be roused to remove it, and then, only then, will religious truths be regarded in their true light—they are thought lightly of, because little of mind is brought to their study.

By the discovery of a law of nature, the mind enters a new mine of wealth, and draws from it another science, and thus the condition of man is benefited, and the arts extended in their use. An art is practised by example—a mason teaches his son to strike the chisel by using it before him—a science,

explains the cause and the effects of an operation. The laws of nature require a mind of peculiar strength and habits to investigate them, but, when successful, the discovery is easily comprehended—that which is known is easily taught—a mind, applied to a subject, without great difficulty, attains to the extent of its capacity. Thus, it is not difficult for an individual, of ordinary parts, to become acquainted with the whole of the sciences; knowledge cannot be monopolised, it is the property of the family of man; individuals have capacities to discover and invent, but the family at large has but one standard to which, the knowledge assigned to the whole is addressed—it is a common fountain at which all drink. The knowledge intended for man is a gift to the race, and it is the proper business of all to make themselves masters of it. So few are the subjects the mind can know, that in an ordinary school they may be taught, and it is the business of a school to teach them—a dead language may be acquired, if the taste of a youth leads that way, but to understand a science forms the stronger mind.

The knowledge proper to man all may gain, none are excluded who are not physically incompetent; it was given to man for the common good, and he is a dunce who, under proper instruction, does not attain to it: every book cannot be read, nor every fact in history remembered, nor every code of laws made familiar, but the knowledge which most elevates the mind all may acquire: but, it may then be said, who will be a servant? The answer is obvious. He that needs the situation; knowledge does not incapacitate

from filling any office, but qualifies for it. Mechanics and other artisans are well-instructed, compared with those of other days, and do not make worse servants—education teaches obedience, by showing its fitness. Knowledge may give a new character to wealth, but it cannot disturb society, because it is the common property of man, which each is interested in exercising, and which is assisted by co-operation ; and it would be a libel on the Great Author of our being, to suppose mind can be only partially bestowed without injury. There may ever be grades in society, but it is not necessary that ignorance should be the basis of them—a master is not served the worse, because the knowledge of his servant is equal to his own—in all the higher departments this is not unfrequently the case. The natural grades arise from the especial physical adaptation of individuals to certain stations : a mechanical memory gives celebrity to a lawyer, a melancholic temperament gives character to a judge, a delicacy of feeling forms the man of taste—distinctions like these, will ever exist, but the wisdom allotted to man is common to all ; it strengthens his mind in the contemplation of its Maker, and therefore it is the business of all to attain : nor is the task difficult, for it should be borne in mind, that the highest attainment of the mind, is to know the cause of a stone's falling to the ground, rather than ascending upwards, and is this too great for an ordinary capacity to be taught ? It appears an insignificant result to obtain by the united intellect of the whole family of man, occupied through many generations on the subject, but it is adapted to their capacity and connected with their wants, and is

evidently but the first letter in the alphabet of the mind ; when a knowledge is obtained of the cause that precipitates a stone, the mind is opened to a higher contemplation of the works of nature, but other subjects press upon it beyond its power of comprehension, and the inquiry forces itself upon him, why am I ignorant ? Why was I not taught to know, as I am taught to walk or sleep ? I think, but yet understand comparatively nothing. The inquiry is vain ; man has not a mental faculty competent to instruct—instinct is prompt to action, but mind must be taught. How, then, can it know the cause of its ignorance, but by being informed ? An uneducated person cannot understand Astronomy, but he may fully credit its existence and its truth ; an eclipse, predicted and found correct, is to him satisfactory evidence—he believes. Revelation is presented to man, but of his origin, and present state, he has not a faculty by which he can fully comprehend the subject ; he needs as full evidence of its truth, as an ignorant person does of Astronomy. Is there such ? Is not the mental and moral condition of man open to similar inquiries, and subject to similar illustrations, and to influences as specifically appropriate, as the mind of a child in the first dawn of reason requires ?

The subjects given for the exercise of the mind have already been stated. They are, first, Mathematics, or the law of size, form, and extension ; second, Gravitation, which, with laws of a similar class, give motion to inorganic matter ; third, Instinct, which is the law of organic matter ; fourth, the law of Affinity ; fifth, the law of the Mind ; sixth, the

law of the Atmosphere. This small catalogue of subjects embraces the entire capacity of man.

Early in the history of the Eastern nations, we find that they had discovered the road to knowledge in the study of Mathematics. They had seen the tree laden with foliage, withstand the tempest, and the cavern sustain its roof, and the pendant stone its position, and naturally asked, how can means so apparently inadequate, resist the force opposed? Can they not be imitated by studying the principles on which they are accomplished? thoughts thus bold were verified. Man, inferior to animals in instructive skill, by studying nature, learned to surpass them; advancing step by step in pursuit of knowledge, he hailed its approach, but knew not in what form it would be presented. At length the law of form, and size, and extension became known, and mechanical power was at once at the command of man, and he felt the dignity it conferred: no subsequent event in his history has been of like importance—the way to the improvement of his condition was now open. Hitherto Architecture had been practised as an art, and experience was the only authority to which to appeal, but now it became a science, and the law of nature was imitated; neither instinct, nor habit, nor accident, but the demonstrations of the closet, suggested the form and apportioned the strength of the building: the honey-comb, and the projecting branch, having been understood in the principles of their construction, were imitated in practice, and the magnificent buildings which ornamented the East, remain as monuments of the science of that day. No succeeding

age has equalled the past, but the mind has not retrograded ; it is inferior in power, because it is inferior in scientific knowledge. The Eastern nations studied Mathematics for practical purposes ; nature was the subject of their study, not the mere solution of a problem, which the student never intends to apply to practical purposes. The buildings of Greece need no ornament, their beauty is in their proportions, and is connected with utility, for so nature builds—beauty without utility is not derived from science, which is a copy of nature—the screw, the pulley, and the lever were invented in the East, and thus the massive block was lifted from the quarry.

THE SUBJECT CONTINUED.

It remains to be ascertained, whether Architecture admits of other combinations and forms from nature than those already adopted, so that, while science is fully maintained, each nation may have a form of architecture adapted to its taste, and expressive of its character; but unless the Mathematics are studied as Newton studied them, and as they had been studied in Greece, modern architects cannot be released from their pilgrimage to Greece or Rome. Do they aim at originality? they must study nature; if they submit to be copyists, other architects will furnish them with models, but posterity will not know, or, if they know, will despise them; if nature be studied in her scenery, which ever delights the eye of the traveller, and occupies his mind with multiplied inquiries into the causes of his elevated serenity and varied pleasures—to him nature will disclose the secret of her charm.

After Architecture, Astronomy was discovered, and it too became a science. This addition to the wisdom of man was also derived from the Mathematics, that keystone of the sciences; every nation, in its earliest and most apathetic state, observed the heavenly bodies with some degree of awe, and made an eclipse of the sun a period from which to calculate events. Hence every nation made some advance in Astronomy, some

fact was ascertained, some inquiry excited, and, as civilization advanced, the most anxious and extended attention was given to the subject, especially by the Philosophers of Europe. But no mind attained sufficient elevation to see beyond the difficulties that perplexed and confounded the subject, till Newton rose, whose gigantic mind put forth its strength, and bore away the palm of honor from contending nations, and gave it to his country : he saw the great commanding Agent of the universe, as he contemplated a body descending to the earth, and, with a beam of light inferior only to inspiration, comprehended one of the principles by which the Creator governs the universe of matter—he discovered a law and constituted Astronomy a science. Gravitation, associated with Mathematics, opened to him the government of space, and, like every other law, gave to man some new exercise of his mental powers, and placed within his command some new and unexpected science.

Had Astronomy not been known, Navigation must have continued an art, and man have existed without being identified as one family, or receiving a common blessing ; but Navigation is now a science, and the mariner launches into the deep, and with the Polar star in view fearlessly directs his way across the ocean, and secures to every nation the improvements of the whole. Man needs a stimulus, and he finds it in his wants, which increase with knowledge, and the bond of union is drawn closer ; create another want, and a continued intercourse becomes necessary to administer to its relief. Without Navigation, the Christian Religion could not have been true, because it could not have

been promulgated over the earth ; but now all that is required for the fulfilment of its predictions, and the establishment of its truths, are secured by natural causes, and the circle of its evidence is not only unbroken, but made complete by its operations.

Two important laws having been discovered in the economy of nature, the mind moves onward in search of new accessions to its strength, in new trophies of its power, and after a well-conducted inquiry into the internal and minute operations of the elementary parts of matter. Affinity was known as a law of matter, and became to Chemistry what Gravitation is to Astronomy, and in no less a degree than the before-discovered laws contributes to the accommodations of life, and conforms external circumstances to mental feelings. By this law it is ascertained that solid bodies are composed of gases, which unite in various proportions and form different substances ; that oxygen, hydrogen, and carbon are found, especially in all organised bodies, and as they are combined such is the substance produced : a given proportion of each of these substances forms sugar, another proportion forms vinegar ; but whatever be the substance, whether organic or not, whether it be a diamond or a drop of water, it is constituted of gases, held together by the law of Affinity.

The principle of life acts on the living body, in a way corresponding to the law of Affinity on brute matter ; when life is taken from the one, and the law of Affinity counteracted in the other, decomposition follows, and that which had been a solid body passes *invisibly* into the atmosphere. Were the carcase of an

animal enclosed in a glass vessel, with one small aperture at which gas could escape, in a few years the carcase would resolve into its original elements, and pass from the vessel in gas, and become the food of vegetables, or be decomposed in the atmosphere. Should the laws of nature be withdrawn, the earth must dissolve and pass away ; held together by elements of destruction, as well as of security, where rests its durability ? but in the direction of its laws.

England, France, and Sweden, share the honor of ranking Chemistry among the sciences. Individuals of each country assisted in laying the foundation and in elevating the column, and thus forming an epoch in the history of man ; for every such discovery is an epoch. On this column they have engraven their names, but above the column on the capital is that of Dalton, who gave to the law of Affinity its last and conclusive demonstration, and thus takes his station by the side of Newton, as the benefactor of his race, and the ornament of his nation. To Chemistry, England owes the rank she holds, and the power she exercises, over the destiny of many nations. The expenses of the American war sunk France in a revolution, and threatened England, but the steam-engine, the pride of Chemistry and Mechanics, gave birth to the cotton factory, and by its side rose the foundry, the glass-house, and the pottery, the print-works, and the dye-house ; where there was difficulty in any of these operations, it was removed by the chemist, and poverty gave place to wealth. Should this nation rise with its circumstances, and not, like other nations, that having risen sink again, and find its wealth the

grave of its virtues, it must be elevated by Education, and another, and a higher standard of character than wealth generates, be set up—then the diffusion of knowledge, with the diffusion of wealth, will form another road to power, that of integrity and worth.

Affluence is the natural consequence of industry, for every discovery in science aids its attainment, it is proper to man, and he may anticipate its diffusion. Knowledge is not only power, but it is property—he that knows how to cultivate may expect to reap—were poverty necessary to virtue it would be the result of knowledge, but a character adapted to the use of wealth, is necessary to its being retained ; to this end there must not only be information but virtue. The mind uncultivated in its moral character finds in wealth its greatest curse ; industry obtains wealth, but enlightened and just principles are essential to its use—a virtuous and enlightened mind may bear poverty, but the relation is unnatural ; it has not the correspondence of cause and effect to harmonize them. To secure to England its wealth, its people must be elevated to its use ; the character that employs it in substantial good, not in silly parade, which requires the mind of a child to admire, alone is rich—education consequently must keep pace with wealth, or it ceases to be such.

Although no national monument speaks the nation's gratitude to the individual who gave perfection to the steam-engine, yet the love of science girds its votaries for new efforts, and laws that are yet unknown awaken their attention : that of the atmosphere claims *their present notice*, already it is known that heat

varies in its origin, and that its origin determines its influence, that it emanates from the earth as well as from the sun, but as heat has no perceptible weight, it may, in all its forms, be essentially the same. The Electric fluid, which melts metallic substances, as with incalculable swiftness it directs its course to the earth, marks the intenseness of its concentrated power, but having reached it, enters with the quietness of a summer's shower: the oak, whose massive trunk it had scattered around in riven pieces, is uninjured at the roots, and the grass around escapes destruction; thus electric heat changes its character, by changing the subject on which it acts.

Such is the relation the heat of the atmosphere bears to the earth. Much, however, remains unknown of the power of heat, and the forms it assumes, and the qualities it possesses: whether it be a pure element, receiving its character from the medium through which it acts; or whether it admits of combinations, and in this state manifests new powers, are subjects of inquiry; air, and water, and earth, have each its specific influence on bodies. How far heat, in its latent or sensible form, may affect the salubrity of a climate, is unknown; that the atmosphere has a specific influence on the health every invalid can testify, but the cause is still concealed, none has even been conjectured. To the art of the chemist, the atmosphere of every altitude, and of every place, yields the same results. The marsh engenders fever, and the air of the desert is scarcely suited to sustain existence, but analysis fails of detecting the cause; what, then, gives the quality to the atmosphere, and

occasions the salubrity of a given place? It is the soil and its substrata, not the air which passes over it. We know not whether one place be more electric than another—it probably is so—metals attract the lightning, zinc and copper give direction and accumulation to the electric fluid, where they exist so near, that their influence is reciprocal; this may influence the air, and no chemist be able to detect the cause, but yet the sick may be conscious of it. The atmosphere in itself can have little influence, it does not wait to benefit, but passes on, and at a few miles distance, the passage of perhaps as many minutes, its character is altered, and that which was salubrious is baneful. Why has a place always the same influence? the winds from every quarter pass over it, but they change not the relation it bears to other places, as respects its healthiness; the wind, that for a month has borne away in one direction its exhalations, as they have risen from the earth, has added nothing to the atmosphere of a neighbouring place over which it has passed—a person in a railway carriage, with a light breeze at the back, nearly travels at the speed of the wind, so that he still breathes the air of the town he has left, it has kept pace with him, and yet benefit is received. It must be evident that parallel situations, not far distant from each other, must, within a few minutes, be occupied by the same air—to change the place, to breathe other air, is a mental delusion, the place, not the atmosphere, gives the quality.

The emanations of the earth vary with the strata; that which contains metallic ore probably charges its

atmosphere with electric fluid to a greater extent than a strata which contains no ore : the atmosphere over a lime-stone rock, holds in solution but little impure vapour, but that of a rich and alluvial soil is charged with pestilence, the air, as it reaches this place of death, is salubrious, and after it has passed a short distance it recovers its purity. How can this be? unless the soil creates the character of the atmosphere by charging it with its vapour ; the wind of every place changes from point to point, and thus the gales that have passed over the whole adjacent country pass over it. Why, then, is a change of residence desirable, if a change of air be all that is desired ? this is enjoyed in every situation. Why was the Pontian marsh the nurse of fevers ? and why are other marshes passed at the speed of a horse, least delay should be death ? but that the soil pollutes the atmosphere—the pestilential qualities of the air of such places receives a name, and is ascribed to a specific cause, originating in the soil, but is not the healthiness of other places equally dependent on the soil ? Why, then, has not it also a name ? Air, that at a little distance was pestilential, at another is restorative ; the removal to the distance of a mile, the rise or the descent of a hill, may place the sick person under this beneficial gale—we speak of miasma being inhaled—why not also designate by a name this better quality Places of resort are well-adapted to the invalid whose cure depends on recreation, but to the sick, a farm-house promises the greater benefit, where the air aids the recovering, because the restraints of a town are not felt. All exhalations from the earth at once mix with the

atmosphere, or are decomposed ; even the contagion of the small pox or typhus fever, when the human body is under their influence, looses its power a few feet from its source ; its virus undergoes a similar change, and is deprived of its malignant character, in the same way that exhalations from the soil loose the evil attendant on them—neither can influence, but near the place where they originate. An East wind, in its effects on vegetation, differs greatly from that of the South, the region over which it is supposed to have passed is assigned as the cause, but the origin of a gale of wind, from any quarter, may have been in a neighbouring parish, and its termination a few miles distant : a hurricane seldom extends in its fury the distance of a hundred miles, and no two registers, either of the wind or the temperature, agree with each other, even if kept in the same county, or even in the same parish ; but the quality of the wind, from whatever direction it may blow, is characteristic of the quarter.

THE SUBJECT CONTINUED.

An East wind, springing up at our feet, and continuing for a few hours, and then giving place to a current from the South, exchanges a cold and arid blast for a soft and genial gale ; from whatever cause this may originate, their respective qualities are in the winds themselves, inherent and natural to them, and not derived from the soil or the waters of other regions. Their origin and their termination being known, exclude the idea of a remote situation being the source of their respective qualities : a wind that continues many weeks may be supposed to have originated at an immense distance, and not to terminate till it had gone round the globe, but winds of the longest duration may pass over a very limited space : the wind that at London had blown two months from the same point, may not have done so at Paris. To ascertain the cause of the specific character of the winds of the four quarters, is a preliminary step to ascertaining the law of the atmosphere. This envelope of the globe, Philosophers describe as an inert body, without any government of its own, receiving and retaining, unchanged, the decomposed gases that the living and the dead organised bodies supply ; some, indeed, suppose that the vitiated air of a town is purified by vegetation, but the chemist cannot detect it in its

journey to the place where the change is to be effected ; the air in the streets of a city, scarcely yields on analysis, a different result from air taken at the highest elevation to which a balloon ascends ; it is also suggested, that a change of temperature, by causing rain to be formed, purifies the atmosphere—but what is the proof that a change of temperature does occasion rain, and what regulates the changes of the temperature, so that the rain falls in showers and not constantly ? To the temperature also is ascribed the rise, and fall of the winds, and other phenomena of the atmosphere. Did temperature, or any mechanical cause, operate in effecting the changes of climate, that of England would lose its fickleness, and become periodical. The atmosphere is the great repository of the vapours that hourly arise from decomposing matter ; but in what way this immense flood is disposed of is not yet ascertained, it being mechanically mixed with the atmosphere, which is a generally-received opinion, cannot be true, for carbonic gas, which is formed in abundance, and which is also found, on an analysis of the atmosphere, to be one of its constituent parts, is heavier than the atmosphere.

Now a mechanical mixture cannot be formed of substances of different specific gravities, the heaviest will be the lowest, the atmosphere, being itself a compound body, is consequently under a law : how that law acts on the extraneous bodies received into it waits to be investigated ; but as carbonic gas, notwithstanding its weight, rapidly enters the atmosphere, the existence of a powerful agent is apparent. *May it not be worthy of inquiry, whether the noxious gases,*

the fruit of decomposition, be not re-converted into respirable air, by chemical agency, and whether the process by which rain is formed, be not that by which the several quarters receive their specific qualities; other inquiries suggest themselves, but this is not the place to state them.

On the law of the atmosphere the science of agriculture depends; that of medicine cannot be perfected till this is discovered, and probably it will be the last science that will occupy the mind by its investigation—after this man will rest from his labours, and then an important change may be expected in his condition. Before any considerable advance is made in medicine, it must be more generally understood, the ignorance of the public on this subject is injurious to them, talents to be exercised must be appreciated: the patient who estimates the value of his cure by the privations enjoined, and the time consumed, may always be satisfied, but a better knowledge of medicine gives another standard—the more that is known, the greater is the strength of confidence reposed. It is thus in the management of property, he that understands it most the best appreciates the advice of others; it is thus in the management of cattle, the proprietor of horses commonly knows enough of their diseases, to judge of the talents of the person employed for them, his confidence is founded not on the success, but on the judgment manifested.

Before medicine can be fully advanced, the minds of females must be strengthened, their worth has not yet been fully known, or their importance felt. When was it ascertained how far a sound and rational education

of the sex, stays the downward progress of a nation? but it may be conjectured how far the neglect of their education, so common in every nation, has precipitated the ruin of the state. A wise and virtuous woman is the stay of her family—many such may be of a nation—if her husband be dissipated, her children still are virtuous, and thus her influence is felt in society. Give to British mothers the feelings that once distinguished the higher class of Roman matrons, and wealth will not be the nation's ruin. The cardinal virtue of a woman is a refined chastity, every abatement lessens her influence, and sinks her from her station; cultivate this, and stability will rise with knowledge, and a more proper estimate be made of the worth of property and of time—but the subject is worthy a better pen.

That great improvements in the condition of man lie concealed in the sciences, may be inferred from the discoveries which a partial investigation has made; even the duration of life has increased as they have become known, but even yet life has not attained its natural duration, and therefore a further increase may be confidently expected, and ought to be promoted. Since Dr. Price drew up his tables, many years have been added to the average term of life, arising almost entirely from the various improvements introduced by the sciences, by an increased population, and by improvements in cultivating the soil; so that now the average duration in towns may be extended to thirty-five years: and is thirty-five years the average term of life of the inhabitants of a town? its duties cannot in *that* period be discharged. Three score years and

ten is the age of man, why is it abridged? Why is one-half our race cut down unmatured, and from whom the world reaps nothing? and why cannot those who survive, promise themselves life till their children cease to be dependent? Why is our existence thus blighted? Is it inevitable? Does our physical system enjoin it? Is it in unison with the works of the Creator, and therefore necessary? If not, man has the power to prevent it, for much is committed to him. The earth is barren that it may be cultivated by his hand, he is ignorant that he may seek to be informed, much is denied him that he may be stimulated to exertion; capacitated to fill a useful station, he is hindered by his life being abridged, so that he is taken away while its duties are unfilled. Neither animals, nor indigenous vegetables, suffer a premature death, as man suffers; their young live, and the old only cease to propagate, when the natural period of their lives does not admit of their young being reared.

Those studies that relate to the continuance of life are the province of the Physician; it is for him to discover the means of healing that breach in our constitution, which is the greatest mark of our degradation—a premature death. If man be not so insignificant, so useless, that half his services can be rejected without loss, it is for him to repair the evil, as it is for another class to remove the ignorance in which man is born; the work is in part accomplished, life is greatly lengthened, and what has been done is but the challenge of the present generation to pursue in its course.

But the disciples of Mr. Malthus will say, why produce a population you cannot sustain, and who either must starve or destroy each other? Speedily after that ingenious and learned gentleman published his sentiments, he was challenged to the investigation of a subject he had not noticed, it is this, "Does not civilization lessen the number of births to a marriage?" In favour of the proposition it was contended, that the families, whose ancestors enriched the history of their country by their deeds, or their scientific knowledge, in a few generations commonly became extinct; that the Peerage scarcely retains a name that, two centuries ago, was associated with the intellectual characters of the age; even the middle class, the men of business and of enterprise, who suffer from none of the checks Mr. Malthus mentions, produce no surplus population, but only keep up their number: to this class accessions are continually being added from the lower, which is itself an evidence that the class is not oppressed by its abundant numbers, and from it none descends—perhaps there does not exist a family reduced to the rank of peasants, that for three successive generations, had received an education sufficient to qualify them for the duties of a counting-house. The mind does not descend; a family may become poor, but they retain, in their own estimation, a right to the station they once occupied, and endeavour to obtain the means of re-occupying it, and of regaining their consideration and influence. Poverty does not degrade an educated family, nor does it long continue to reduce them; vice is their bane, but vice does *not* make them peasants; had they virtue enough for

a peasant, their mental strength would elevate them above that rank.

There are families of various ranks, who trace out a long line of ancestors, possessing the same property from the Norman Conquest, and feel themselves honored by the circumstance, and think it rank; but have they not been men of ordinary capacities? has there been one man of talent, or of enterprise, during the whole period? To compliment such a family on its antiquity, is to compliment it on its uniformity—the intellect of a thousand years since is the intellect now. Athens had not such families to keep up its population. There Philosophers reached the full period of human life, but the children did not in number equal the parents, and the population, which in a period of less mental cultivation, rose to thirty thousand, in the day of its intellectual strength, sunk to twenty.

That which happened to Athens, is, in its principle, felt by every nation; and it may be assumed as a fact, which appeals to the history of every age, that the ratio at which a population increases may be measured by that of its civilization, or, more properly, by their mental culture; and thus the check nature has imposed, like all other of the acts of the Creator, is full of wisdom and of goodness. It is necessary to occupying the world by man that his principle of increase should be great, but as it approaches to fullness, the collision of interests, with the emulation and the energy the mind receives, lessen the influx, and, at length prevent it; and thus the check nature imposes is founded in the constitution of man.

Instinct is another law of nature, at least in this rank we have presumed to place it, for on it is founded a new and most important science, that of forming the disposition; and a science is the test of a law. The cultivation of the temper, the habits, and the bias, and all that relates to the character of man, not derived from, or dependent on, the faculty of reason, is the cultivation of instinct, and owes to it its character, and therefore has a conspicuous and most influential place in education. This hitherto much-neglected portion of our system calls for cultivation. The foundation of character, that which constitutes its civil and social intercourse, is not so dependent on the rational as the physical faculties—is not so much dependent on the school as on the parents—the six first years of life are little valued, no seed is then supposed to be sown, that will spring up in after life, or that any weed will, at that early period, shoot forth, a leaf which may not at any season be plucked up—this misapprehension of the power of instinct, a full knowledge of its power is calculated to remove. The subject, in its proper place, will receive some attention; for the present it is dismissed.

The only law that is yet to be noticed is the mind. Unfortunately for the world, this subject has not had the advantage of the attention of the public; men only of rare and cultivated talents have devoted themselves to it, and, impatient of the necessary caution the subject requires, have, without elementary knowledge, drawn conclusions and advanced theories, which have fallen on being attacked: hence, after the

labour of more than two thousand years, no practical result has rewarded their labour ; for it should ever be borne in mind, that the successful result of a philosophical inquiry into any province of nature, is succeeded by some discovery in science : nothing, therefore in philosophy, should be received as established, until some practical good in advancing the comfort and the power of man has been ascertained—all that the mind can comprehend has been created, that it may be enlightened and instructed. On man it depends to lift up the curtain that hides the source of his power from his sight.

The pomp of words have taken the place of knowledge, by mental philosophers giving that attention to ascertain and fix their precise meaning, which ought to have been devoted to the establishment of facts ; their advance of the subject of their inquiry has not been by elementary books, by records of facts, and by the investigations of principles of a secondary nature, but, depending on the power of their own minds, they have advanced theories which destroy each other, and manifest only the skill of the combatants ; to the world their attention affords no beneficial result. Before any law has been discovered, many facts connected with it, are well understood and familiarised to the mind. Newton spent his morning and his midnight hours in the contemplation of facts known to the philosophers of his days, and on which he depended as his guide to a higher form of knowledge. Dalton was not less indefatigable, he also received and acknowledged the discoveries of others. In both cases the world was prepared for an accession to its know-

ledge, by the efforts making to attain it, the result was watched with solicitude by the public ; but this cannot be affirmed of mental philosophy, it has excited no general interest, it has discovered no principle, it has conferred no benefit ; greater talents have not been exercised on any subject, but the want of system in their inquiries has disappointed the world, and left Education an art. No Master can assure to his pupil a given character—it is not within his power—on this subject he is irresponsible. What, then, is his duty ? It is to teach, by memory and by habit, certain mental and mechanical exercises, and, in a great majority of cases, the obligation is well discharged, but the character is not formed and ought not to be demanded ; the circumstances of the place do not favour the attempt, for to this end individual attention is necessary, which cannot be given—was it even the suitable period of life, the Master cannot pay a parent's attention to many scholars.

But Education is not a thing of nought. Laws are given to secure the well-being of the physical system, and is there none for the mental ? Is there no certain road to travel to reach a given point of mental strength ? Has Education no sure result ? The mind cannot be disregarded by its Maker—it is not a waste that cannot be cultivated—he has made it to man as he has made the soil, susceptible of improvement, and has afforded the means, and therefore it is not optional with man whether he will use them or not : if he does not sow, he will not reap, the obligation is imperative—it is thus with the soil, it is not *less so* with the mind—nothing in nature is con-
jectured

tural, the means that are appointed to an end are those that will accomplish it. Education is the means appointed to increase and strengthen the mind, it is therefore not a peradventure, (the obligation being enjoined) the end is certain. Revelation expressly commands that children be taught, but, like the cultivation of the soil, it is made a natural and necessary obligation, and therefore the subject of a law—command being mixed up with our nature, it cannot be dispensed with. The cultivation of the mind is the foundation of all improvements, and gives the capacity to enjoy them ; moral degradation and mental ignorance are so injurious that human legislation originates from them, their connection points to the means of relief—Education.

If there be no power by which to guard against crime, all punishment is injustice ; but, if Education be an ordinance in nature, and necessary to man as a social being, then it has a law as its principle, and ought ere this, to have been a science by which to model the character by established rules, to a fixed and pre-determined type. By the discipline exercised on brutes, their propensities are subdued and their habits formed, and thus that which would have been injurious becomes useful. Science, when established, will take hold of this fact and introduce it, and more than it, into the education of children. It is a reproach, that while animals are trained for a specific character, children pass the most important period of existence without any direct and appropriate system of management. But if one vice can be made disgraceful, so as to be avoided, another may, and thus

the parents be made ashamed of themselves, who have cause to be ashamed of their children.

Education is the business of existence, man must possess it, or his enjoyments are not those of a man; nature is his study, he drinks at this fountain and it increases his thirst, he returns, but it is dry, every science issuing from it is absorbed; from this station he looks around, expecting happiness because he desires it, but it is still future. Could he mature his mind, and enjoy to the utmost extent of its capacity, the limited duration of life would be to him a dream of horror; the comfort of the bed would be unfelt, while the image before his mind would absorb its power and fill it with terror. The possession of all the knowledge the capacity can attain, with all the enjoyment the heart can feel, for a short period, never to be renewed, would be such a dream—a day is passed, a portion of bliss is gone for ever, the store is lessened, and, like a miser, whose sorrow for a fragment of his wealth steals from the whole its charm, he is sad—time without novelty, and the future without interest, is the happiness of an animal, but the man, who builds on the future, enjoys the present.

The mind is formed to increase—it is its assigned occupation—and when the sum of its knowledge is completed, man may then appeal to his Maker, “Why hast thou made me thus?” Education, by the discovery of physical nature, prepares the mind to search more fully into the truths of Revelation, and the certainty there made known of the future enriches the present—Reason is without an object, if that *object* be not future.

OF COMMON SENSE.

Common sense is not an original faculty, or elementary principle ; neither is it an attribute of reason nor an impulse of sense, nor a mechanical result ; neither is it an obscure and undefined influence, of doubtful result, or feeble operation, but its origin declares its character, and claims for it a marked attention : reason lends to instinct its wisdom, and, thus united, they become one power, and act as one principle. Common sense is the result of this union. Instinct, acting in conformity to reason, acting under its influence, is the source of this power ; by this new faculty, for it merits the distinction, the business of life is conducted, and it becomes the test of practical knowledge, the standard of constant reference ; neither instinct nor reason can individually direct the affairs of life, both are essential to man in his social capacity ; but reason, unassisted by instinct, hesitates and pauses, and while deliberating the occasion passes by, or the opportunity ceases. Instinct, by itself, is limited in its power and confined in its operations, and incompetent to much of the business of life, but, united, its action is complete—a being governed wholly by reason, or wholly by instinct, is more or less than man. In common sense, the two great energies of man influence the same action and produce the same

result. Besides man, no being in the universe, of whom any intimation is given, is thus directed : reason, enforced by instinct, by presenting a complex presents also a fallable being—matter and mind uniting in one character obscures both. In this state of diminished energy the will interposes, and usurps the command. This power is without a principle by which to direct its measures, or a standard by which to try them ; it is at once capricious and authoritative, the adversary of reason and the subverter of instinct ; when it usurps entire authority the strong laws of reason and instinct are broken by its strength and it reigns, but it is the reign of madness—should it will self-destruction, what can hinder its accomplishment ? To instinct and reason the deed is alike abhorrent, and so long as a whisper from either is heard the hand is held back, but when these natural restraints are broken down and silenced, the deed is done, and its own measure terminates its power. This is madness. Common sense supposes the co-operation of the will, whose determined opposition is more than it can resist, but, in ordinary circumstances it does not oppose or counteract, and thus the affairs of life are suffered to go on.

But it may be objected that what is called common sense is only another name for habit—be it so—it is not a habit which an animal can form—it is a habit into which reason enters. The tricks imposed on animals are intended to represent reason, and they bear its character, but the actor knows it not. Habits, induced by man, characterise their origin, and wear *the garb* of reason in whatever way they are exhibited:

a habit is released from the mind, and is as unconnected with thought as an instinctive action—it has little responsibility, for it is practised mechanically. A dog defends his master's house, and a sparrow lives in the face of its enemies, from habits, induced by intercourse with man. The dog is taught by discipline, the sparrow by exposure to danger; one dreads the whip, the other detects, and shuns the approaching animal, the gun, and the snare—both are sagacious, but neither is rational.

A slight portion of reason supplies sufficient common sense for the practice of a common art, but no art can be taught an animal; for without rationality there is no common sense. This compound faculty depends on a subject being understood, at least in its practical operations—an animal may be vigilant in the practice of various habits, but, without a knowledge of their character and object, its practice is mechanical. A female servant, unacquainted with science, practices many arts founded upon it; to wash, to brew, to bake are of this description, which she practices not from habit and without observation, but in part at least by rules founded on chemistry, the operation of which are, in a measure, comprehended; in learning each respective art the directions given and the rules laid down are punctually observed, but practice makes them unnecessary, and they are forgotten, a habit has been formed which is acted upon: but, suppose a process does not go on in the usual way, the conductor exercises her understanding, she thinks on the subject, if without success an experiment may be made, or a direct appeal to science may be resolved on, but this

is not common sense. Should a person of more experience be consulted, her advice may increase the stock of the inquirer's knowledge, and when practice has made it familiar, it becomes to her common sense.

Common sense is science practised without thought ; practised as an instinct, it is a habit of acting in conformity with the character of reason. " Mr. Brown was once employed to remove a house from the top to the bottom of a sloping ground, and, as no additional impulse from screws was here required, he resolved to ease the building down, as sailors call it, by means of tackle. Unfortunately, about the middle of the operation, the strap of one of the blocks broke, and the operator, who was standing on the lower side of the building, was horrified by the apparition of the house under weigh, and smoking by its friction, right down upon him. With that vigorous presence of mind, which is compounded of thorough knowledge and a thorough sense of the necessity of immediate action, and without which courage is often useless, he dashed a crow-bar, which he happened to have in his way at the time, into a hole accidentally left in one of the ways, and leaping on one side watched the result."—BASIL HALL'S *Travels in the United States*, vol. 1., p. 43.—If, for the words presence of mind, common sense be substituted, a fine illustration is given of its character. Instinct apprized him of the danger, and before he had time to think he saw the crow-bar associated with his rescue, had he not used it he must have perished. This was not an act of reason, it was too precipitate for reason, it was common sense. A wounded soldier grasps his

sword, danger and defence gave him but one impression, instinct placed his hand upon his sword, and reason had taught its use and, practice made it a habit.

The reader will probably feel, with the writer, the difficulty of illustrating this subject, it may, therefore, be well to retrace our steps, and ask what is common sense? It is not a habit, or it might be taught to animals. It is not an original faculty, or all men would possess it. It is not an attribute of the mind, or it would admit of distinct cultivation. It is not an impulse, or its relation would be only to sensible objects; nor has it a mechanical origin, or its actions would be uniform. No one is ignorant of its character, especially when an action is destitute of it, but who has described its operations, or even pointed to its origin? An action may be wholly rational or wholly instinctive, but neither can perform an act of common sense. A philosopher may, without experience, conduct the process of bread making, it belongs to science, but if every stage of the process be arrested to inquire into its philosophy the bread must be rendered uneatable; on the other hand, an uninstructed servant has no mental resources, and instinct, her only reliance, cannot conduct her a single step in the management of any process, she who depends on instinct finds it helpless and is discomfited; can it proportion the parts which constitute a loaf. Reason devises but cannot execute—instinct executes but is unable to devise—but their compound action wears the impress of nature, and gains the highest place in the economy of life. Supplied from one common root, (the senses) in their union there is no

incongruity, no unfitness, they harmonize, and are in accordance with the wants and condition of man ; by this union he rises above the animal, who is the creature of instinct, and imparts to its nature, existing in himself, a portion of his mental strength. The two principles flow as one current in the ordinary transactions of life; habits which reason suggests, become to instinct as its own, and, when applicable to its wants, are adopted as such.

By this union another active power is created, which claims another and an appropriate name, that of common, or united sense. Without instinct no measure is sufficiently prompt; without judgment none are sufficiently safe—instinct cannot mend a garment or make a shoe; reason cannot cause the pulse to beat or the sap to flow. The possession of two such principles implies their united action; were it not so, man would be two beings, and not the character we find him. The common occurrences of life are examples of this union—a door is opened or shut as circumstances require, without the interruption of thought and almost without noticing the fact, the eye dictates the measure; an animal does not do this, and never can be taught its use, it is to the domestic a matter of course, but a matter of course requires common sense—no incongruous action comes under this character, no suitable action is without it. A cook, in preparing a dinner, is chiefly concerned in observing the time when it will be expected on the table, in the preparation a glance discovers the progress and directs the measures. The mind of the cook is not exercised in profound meditation on the

principles that establishes her art, common sense is sufficient for her, and how is it expressed, unless by the application of her knowledge, not by the suggestion of thought but of sense. The senses guide the cook, but the means they suggest are those of reason.

Common sense is the measure of practical knowledge, and by no means a given quantity—for instance, a soap-boiler, taught by the example and instruction of another, commits an error; he appeals to his common sense, he examines the quality of his materials, and inquires into the management of the fire, from neither of which the evil arose—he appeals to a chemist, who knows no more of the materials or the fire than the operator, consequently his common sense on these subjects is not superior, but he investigates the process, and at once detects the error—his mode of judging is by common sense—to discover the error was with him to understand it—had he deliberated it would have been an appeal to reason, and reason must have directed the measure, but the operations of reason are too slow for the business of life,—reason is only fit to counsel in difficulty, not to direct in ordinary cases.

Common sense is not a gift, not a natural endowment, but an acquisition, a consequence of instinct, acting with reason and enforcing its decisions. Hence the standard of common sense is the amount of knowledge familiarized by practice, so as to become a habit; it is the suggestion of the moment, and is the connection in the mind of cause and effect—it is the union of principle with practice. Instinct directs that food be taken, but how can it be accomplished?

It directs also that the teeth be used to tear the meat, and that the palm of the hand be employed as a dish, out of which to drink ; but reason provides the knife and the goblet, which instinct prefers and uses with the same impulse, and for the same purpose as she had used the teeth and the hand : a civilized person does not prostrate himself at the fountain, or devour food in a way little different from animals, that which was natural has become vulgar, and not in accordance with existing feelings ; an evidence that instinct has adopted, as its own, the improvements of science. A ship in a storm places the crew in a situation altogether artificial and perilous. The captain cannot retire to his cabin to exercise thought, to think is to realise his situation, then to become a coward and perish. Common sense is his only stay, it does not think, it acts ; when he studied navigation, shipwreck and death were not the images presented to his mind, he expected a storm, and rose, in his own estimation, as he pictured to his imagination his ship, shattered and torn, entering port amidst the acclamations of other crews, as his own floated by them. The thought of this triumph girded him to meet the danger ; all besides himself were alarmed, even the animals perceived their peril and shrunk from the scene—instinct forsook them, it gave them no impression, inspired them with no confidence, led them to no exertion—it knew them not—their situation was unnatural, and therefore unprovided for. The state of the passengers differed but little from that of the animals—they could not think, and being without the elements of thought, they *felt* the despair of ignorance. But the captain relied

on his scientific knowledge, often had he revolved in his mind the circumstances of the moment, and now the position of the ship dictated his orders—he had not to think. Instinct takes the lead in seasons of danger, and when common sense has been gained on the subject, it is acted on : fear, in such cases, is only felt on the review, not at the moment of exertion—instinct is not afraid. Had the captain paused to consider the orders he should give, the crew would have perceived his embarrassment, and fear and confusion and death would have followed ; their confidence is in his promptness.

Common sense is the instinct of a rational being in the pursuit of a rational object ; in the season of jeopardy it knows no fear, and thus it is fitted to meet it : so much is common sense in all pursuits the test of efficiency, that a philosopher is not screened from ridicule who commits a practical error. The amount of common sense gives to a nation its character. The savage who has learned to turn a grindstone, prides himself on an acquisition of which his countrymen do not know the utility, or can practice as an art. The French have more inventive minds in matters of taste than the English, because they study the subject more—grace is to them a substitute for beauty—their common sense is on this subject very conspicuous, but they do not pursue it into the business of life ; they do not make themselves familiar with principles of ordinary occurrence, and therefore common sense does not form part of their national character—they are culpably wanting in this order of greatness. The child of any nation that goes from the nursery to the

school, and from the school to the college, is often learned, but common sense did not possess a place in his education—he is deficient in practical knowledge. The Indian tailor, who put a patch on the elbow of a new coat, wanted common sense. Instinct and reason had not coalesced, but acted separately: thus it is when a learned man is said to want this faculty. Had common sense been exercised, the tailor would not have imitated in the new that for which the old had been rejected. Common sense is the end of education and ought to be its leading object.

OF MATERNAL INFLUENCE.

Already this subject has been briefly noticed, but it has a further claim from its intimate connection with education. Maternal influence is not, on the birth of a child, discriminating, consequently, at this period, it is not influential. The babe is not identified by its mother, or the mother by the babe, nor does any animal know its young at this period of their existence. The young, even of another species, may be substituted and the fraud not detected. Cats will bring up hares and rabbits, and foxes will bring up hounds: canine animals, bereft of their whelps, have taken into their kennels the young of various animals, and caressed them. Books of Natural History furnish many such facts, some of them unexpected and ridiculous; even young ducks have been the objects of a dog's affection, and when they have approached the limits of its chain have been carefully brought back to the kennel: so that the love of offspring is not so much the dictate of instinct as that of rearing them.

By this wise provision of nature the destitute young are fostered; indeed, the chief care of instinct is the young—on them depends the continuance of the species. Animals that have given suck to their own, or to the young of another, recognizes them by means and in a way a mother cannot; but a mother

is compensated, her breast is occupied by feelings unknown to animals, based, indeed, on instinct, but allied to reason, and are at once unanticipated and unimagined, overstepping the boundary of instinct, and imparting vigor to the mind and virtue to the heart. A mother becomes another creature, acts upon another theatre, looks to other ends, lives for other objects and with other motives; her union with her babe is more definite and powerful, more elevated and influential than any she had known before—no trust can be so great as her's, no reward so high—it is given to her to create a character, which sheds a lustre and stamps an importance on marriage, unknown to every other institution of nature—it forms and brings forth the character of the parents, as well as lays the foundation of that of their offspring. Marriage is the natural condition of man, without it his virtues and his sympathies are incomplete and imperfect, and unexercised—no vice is unchecked by parental duty, no form of happiness or of virtue unimproved by it.

The natural, the appropriate relations of the parents assigns to each an office: kindness of disposition, generosity of temper, and soundness of judgment make up the female character, that which nature designed her to bear; no other befits her duties, or accords with the bias of her nature—the whole circle of her obligations point out this as the jet of her character—nature formed in her the rudiments which it is the business of education to complete.

The sterner virtues belong to the husband, he is the protector of the family, he meets the storms that assail it and bears them from those he loves—he is their

shield, their counsellor, with him resides the power. Is he a savage? is wife his slave. Is he civilised? he still degrades her; she is not his equal, educated for the season of youth, when it is passed, the business of life is disrelished—accomplishments are well as accomplishments, but they are tinsel by themselves. Female education should have a respect to the character of the wife and the mother. Why substitute a toy for a jewel?

But, to return to the subject. Other passions and other instincts are checked and limited by the right exercise of reason; but maternal love has no check, it cannot be immoderate; it is not an impulse but a virtue, rising above all other virtues in influence and in strength; neither instinct nor the will diminishes or degrades it—it is the perfection of our nature. A mother's frown derives its force from her affection, a stranger's terrifies, but her's commands. An indulgent mother that yields her power, no longer loves her child with a mother's love—her's is a love that destroys, it ceases to be honorable because it has ceased to be rational—indulgence is not love, it is not the element of the female character, it is not her power. Affection blunts the edge of instinct, and dries the tear of unavailing sorrow; it dwells not on the dying sob, or on the moment when the grave closed upon her babe, but its caresses and its smiles live in her memory, and are recalled with the fondness of a recent joy—all other seasons of delight and pleasure are so recalled, instinct's day of sorrow is passed, and its reminiscence may afford at least serene delight.

Already we perceive that the connection of a mother with her child is more than instinct. Instinct moves

in a circle, with feelings appropriate to its wants, but without the power to diverge, or to extend its sympathy to individual objects—it operates only for the common good. Instinct feels no pity, anticipates no sorrow; to the sick it gives no aid, to the dying no sympathy—the stricken deer is driven from the herd, and the dead are abandoned—instinct has no office to discharge, no fondness to bestow, beyond the wants of nature; but affection is a mental power and claims its own rights, and acts upon its own influences.

It may greatly facilitate our inquiry into the extent and character of maternal influence, if we first make ourselves acquainted with that of animals. When the old and the young have recognised their relation to each other, protecting and fostering care is given by the old, and obedience, without hesitation or counter-acting influence, rendered by the young; if the dam is alarmed, the young, at her command, are motionless—is she attacked, and in jeopardy? they are apprised and conceal themselves—is she tranquil? they gambol in confident security—do they, unauthorised, quit the nest, they are drawn back in anger, but when they are led forth the vigilant eye of the dam guards them, while she teaches the food that is proper, the situation that is safe, the enemies that are to be shunned, and the snares and gins that are set in their path; but her influence does not terminate here, much, very much, is in her power—she imparts her disposition. Is she tame and docile? so are her young—is she wild and fierce? so are they—the hand she licks they lick, or that she forbids to approach they forbid. The habits of a sparrow are artificial and new to the

race, and were formed by circumstances, yet the young are made acquainted with and prepared to meet them. Is a gun carried in imitation of a stick ? the craft is detected ; or let any other animal be selected, and the young will be found early acquainted with the circumstances and the customs of the species of that district, not by experience but by instruction. The history of the rook, and of any social animal, affords abundant proof of an accumulation of knowledge in the tribe, which is made known to their young, and to strangers that are received among them. Col. Stewart put the whelp of a hound among the cubs of a fox, before they had been recognised ; it was, when grown, hunted with the pack, but it had imbibed the disposition of the fox—other hounds refuse to follow that animal when it takes ground, but this readily entered the hole and joined combat. The hare that has been brought up by a cat becomes its companion, and they play together and understand each other. The cossit lamb never resembles the flock, taken from the ewe before it had been taught by it, and brought up in a house, it acquires the manners and disposition and habit that circumstances impose—the more it is caressed by children the less natural are its dispositions. A calf, brought up in this manner, is commonly vicious, and runs at children or those that have not gained authority over it ; a colt, so reared, acquires a similar disposition. But when an attempt is made to give a specific character to an animal, means are used and the end is accomplished ; the young animal is placed under influences adapted to form it, and the success is certain : the

wild are domesticated, the tamed gain confidence, and the fierce become gentle. The duck tribe are naturally wild and shy, and if hatched by their species in this state, although pinioned and compelled to live with other ducks, yet the young do not domesticate, but have all the native wildness of the old—they have imparted their disposition. But if the eggs of the wild duck be hatched by one that is domestic, the young are less wild than they would have been in their natural state, but still they are far from being tame ; but if, on the following year, the eggs of these young be also placed under a domestic duck, the young birds will acquire more of the domestic character, and, in a few years, by persevering in the same plan, the young from the wild stock will attain all the tameness, and assume the general character of those that have fostered them. But there is in the same animal a more striking illustration still of the influence which can be exercised upon them. At an early period of its existence a duck, hatched by a hen, has all the dispositions of its species, the water is its delight and it seeks to be upon it, but it alarms the hen, and she uses her influence to counteract this natural propensity, and sufficiently succeeds to show her power over a brood not of her own species. The young ducks keep near the margin of the pond, and never swim with the boldness of other ducks ; as they grow up the propensity for the water lessens, and they become the companions, not of their own species only, but also of those which brought them up : the character of the duck is lost, and it seems unable to distinguish to what species it belongs. The disposition

imparted by the hen is never overcome—they are hybrids in character, and become troublesome to the hens by their incessant claim of relationship. No farmer keeps as stock a drake hatched by a hen.

This fact is well-established, and the cause generally known, and ought to rouse the attention of parents to the character of those they intrust with their children. The dispositions imparted to the duck are not those that relate merely to the period when they are under the controul of the hen, but to dispositions proper to other periods, and that do not spring up during the season of dependence—they have received a bias from their nurse. It is inexplicable that seed, sown at the earliest period of life, only spring up in mature age, but the fact is before us, and of common observation, and a subject of important inquiry. But the fact is not confined to the duck, the eggs of a partridge, hatched by a hen, show the same influence: the hereditary wildness of the young is at once subdued, alarm at the sound of the human foot is not felt, and the authority of the hen is more complete over them than over ducks, probably because the alliance is less unnatural, the young partridges mix with chickens, hatched with them, and they eat and associate together. As they grow up the authority of the hen naturally lessens, and the character of the partridge is more shown; they wander from the farm-yard and become more wild, and at length select a neighbouring field for their residence and wholly forsake the society of the hen. But they are not wild as others of the species, for in winter, if invited by a

little corn, they welcome the hand that feeds them and approach the house, half-domesticated; at other periods they are of easier access than if they had not known the care of the hen—her influence is never effaced.

THE SUBJECT CONTINUED.

Here it may be asked, in what does the affection of a mother differ from the instinctive influence of an animal? It does not differ so far as instinct extends, they are one—but mind belongs to the mother only, and has its own expression and its own influence—instinct, having received strength and character from reason, contaminates or purifies the physical nature of a child, and imposes a vast responsibility on the parents. The nurse, if she loves a child, and obtains its affection, infuses her spirit, and lays the foundation of dispositions, not yet in existence. A beggar, mean, wretched, and disgusting, if she has stolen a child, or been herself its mother, becomes to that child its only object of affection: children with whom it associates are better fed and better clothed, but it regards it not, no wish to exchange its wretchedness for their comfort ever enters its mind, it is satisfied; the mother has identified herself with her child, and it breathes her spirit and imbibes her temper; no change of circumstances can be promised to the child that creates a wish that it was realised—the bias its disposition has received harmonises with its circumstances, and it is happy. Should the child, at six or seven years old, be placed in a situation advantageous to its mental growth and personal comfort, the mother's

instinctive capacity will be found to have modelled that of the child's: other habits may be formed, but the disposition implanted will be developed—every year will give evidence of its existence by some new form of its appearance. The disposition the mother implants requires a direct and vigilant counteracting government to suppress its wild tendencies, and success may correspond with the teacher's efforts, but the character that is thus formed is artificial and forced—it may be correct but it will not be natural. The mother's character, in its leading features, is formed without effort, and seems natural.

The children of foreigners, nursed by their mothers, grow up like them; their associates and school-fellows do not overcome their native manners, they are, in disposition and in habits, foreigners; but, when nursed by a female of the country, their sympathies and their aversions are her's—national character is dependent on the nursery—it is the source of a nation's greatness or a nation's degradation.

The peasantry of most countries are equally poor and equally ignorant: a Polish peasant is as wretched as a Russian, but a Pole has fought for the liberty of his country; a Russian has not, he dares not, as a man, to assert his nation's rights—the bringing up of the one inspires a different spirit to the bringing up of the other. That mother is without the energy due to her sex whose son is a coward. To make a nation manly, the women must have some energy of character—if they love their country, their sons will defend it; if they are trodden upon and mean, their children will be dastardly and cruel. The French and Irish,

the Spanish and German peasants are about equal in poverty and in ignorance, but the difference in their characters is as wide as the most opposite systems of education can make it—their breeding has produced the difference.

The instinct of every child is subject to its mother's; and all of reason that enters into her habits is taught her children—through this source of influence they derive their instinctive character and their national habits. As a hen forms the habits and gives the disposition to her brood, so a peasant mother governs her children's reason; by her is conveyed the bias, it may be said the strength, of their future character. Can it be imagined that a child, nurtured by an animal, will not be debased? or that it can be brought up by a savage, and not partake of her spirit? or by a generous and noble-minded woman, and give no evidence of the fact? That mother does not know her power, who is not conscious that the first momentum she gives the mind of her child admits of an endless increase in the direction she gives it, and that, in a great measure, she holds its destiny.

The degraded state of the female peasantry of three of the nations just named is the great bar to the advancement of their respective nations. The Irish are the exception—there the women are not degraded by the men, but hold their proper rank, and are deemed their equals—here the schoolmaster is only needed to make the nation great—in other countries the relations of society must be re-modelled, before a satisfactory change can be effected. Ireland the ground is prepared for the seed, in a manner which

ensures to that nation a richer harvest than has ever yet been reaped ; no nation ever emerged from the night of ignorance under circumstances so advantageous and great. Her females are her bulwark, and assure to their nation distinction and power ; their chastity is proverbial, and surpasses that of all other nations at any period, and must exalt the people : all other female virtues owe their lustre to this, they are its ornament, and all that is noble in sentiment and chaste in feeling spring from it ; it is implanted in the hearts of the children—it is the cardinal virtue—other virtues are gems in this diadem, and there is no brighter crown ; other virtues without it fade, and are nothing. Greece and Egypt, and Persia and Rome, with the nations of the East, have risen to greatness, but it has been political greatness—their virtues have been political, not moral—patriotism and honor, and renown pressed on their energies, and they rose to a greatness which is imperishable ; but it was not founded on moral worth, and the nations fell. Persia and Greece knew the importance of early instruction, and something was known, especially at Rome, of the permanent influence of the mother, but the knowledge was very limited ; for where chastity is scarcely esteemed a virtue, morals are unknown—with such, national prosperity is the prelude to destruction. The world has yet to learn the effects of chastity, as a national character and a national power, in elevating and maintaining a people, and it will be learned in Ireland ; she is lifting out her hand and craving charity, as a beggar craves, and that charity is *Education*—she will receive the boon and honor it.

The lively, happy, energetic countenances of the many Irish children that yearly arrive at Manchester, contrasted with the sullen, downcast, disobedient countenances that are often seen in children far better fed and clothed, cannot fail to excite an inquiry into the cause—when made it is not long concealed. The mother well discharges her duty ; her children are happy by her fond attentions, they are obedient by her mild but steady and inflexible discipline ; the children of no other peasants are so well nursed, or present such animated countenances, the effects of nursing, and whatever may be the state of their dress, their persons are clean. A mother's instinctive teaching is all the education they receive, and from this their instinctive readiness is formed, and becomes so conspicuous, surpassing that of any other nation : quick of apprehension, lively, gay, and kind in disposition, they are every where received, but, from the want of education, this avails them little, and they are the hewers of wood to the kingdom and its colonies. A mother's power is gone at six years old, and, by this time, all an Irish peasant knows is imparted, and no other instruction awaits him. Their character is derived from instinct, its high cultivation by the mother, standing alone, exposes them to errors ; at a glance they see an object, but reason being uncultivated, their judgment fails : an Irishman's advice is never asked, a Scotchman's often—the Irish are not distinguished for common sense. The energy of their character, with their absolute want of mental cultivation, is a decisive evidence of their mother's care—had education been partially bestowed, all might have been

benefited by intercourse with the instructed, but none are exceptions, where all are neglected.

The Scotch, originally the same people with the Irish, passed age after age in the same abject state of poverty and wretchedness, but, at the present day, in national character they widely differ—the one sparkles with wit and gaiety, accompanied by an affectionate disposition, an affable temper, and a chaste mind ; the other is thoughtful, judicious, prudent, wise in council, persevering in purpose, and moral in their habits. Education and Religion have formed the character of the Scotch, but the Irish character is formed without them. I wish not to be offensive, but the Catholic religion was not intended to form a national character similar to that of the Irish. In every country where it is established, the moral habits of the people are low and degraded ; but, in Ireland, some strong counteracting influence has borne down all opposition, and elevated the nation above all other in the most influential of the virtues—one obvious source of the Irish character is the estimation in which the females are held, and the respect which is paid them. In Scotland the women have not the same rank, some offices the men think degrading are imposed upon the women, such a sense of inferiority weakens the female character, and lessens her due influence. In Ireland the women are honoured, and an equality of influence is maintained.

Circumstances, which now it would be difficult to trace, may have led to the respective characters of these nations, but we ask not the cause, the fact is before us, and whatever it be, its continuance depends,

especially in Ireland, upon the mother—she is the nation's teacher. Is she chaste? her six years' power writes it on the hearts of her daughters; it is not with them an artificial virtue, ever in jeopardy, but becomes a part of the established character, whose guardian care is the bias of the mind towards it. No one doubts the power of the mother to inculcate the love of truth and honesty on the dispositions of her children; if she loves them her task is not difficult, or the result doubtful. A child, thus taught, is not tempted by opportunity or by example, the bias of the disposition is adverse, and influences that would destroy others, who had learned integrity by precept and by habit are unfelt. Irish females drive away a tainted character from their society, and the father, among the lowest of the people, would, if not prevented, pursue to death the betrayer of his daughter. With chastity as deep rooted in the disposition of a female, as integrity may be rooted in that of a boy, an amiable and accessible disposition, (under other circumstances too often the prey of the designing,) has here its own safeguard, and feels and resents an affront, however slight, with indignation. This refined and high-toned sense of honor can never be implanted, if childhood passes without it.

Should it again be asked, how can this be? How can a poor illiterate peasantry surpass in virtue, in its most refined and perfect form, the children of the sedate, and wise, and honorable? The answer is repeated, watch carefully the influence of the mother, or one to whom she delegates her power, and it will be discovered that the disposition, so honorable to

herself, she has communicated to her child. In every country, where the want of chastity is punished by contempt and shame, the educated females are irreproachable—education has made them virtuous—their early bias has, if bad, been subdued. Chastity is congenial to the mind, and readily becomes a part of it, for virtue does not exist where reason is withheld, it is the companion of rationality, and when it has become part of the disposition it has the aid of instinct to convey it to the mind. The fear of infamy is said to be the shield of virtue—it is no shield, exposure is never anticipated. It has another shield in its own abhorrence. Virtue, founded on education, may be of doubtful growth, but, when implanted by the mother, it is natural, and has itself for its standard—it refers to no rule, no example, no expression of public opinion, it is a virtue implanted, when, as yet, vice had not been exercised, or its nascent principle imbued by the contaminating influence of the vitiated mind of one who had gained the affections in childhood. In infancy the seed is own, and if the chastity of the Irish peasant be not from this source—if it be not formed by the mother's influence, in what other way is it formed? She is ignorant, and after infancy is passed cannot teach—she is poor, and cannot excite emulation by her station, or by the promise of a better—she has now no influence, no authority, for she has nothing to impart, her slender stock of ideas are already known to the child, and therefore, in this sense, there is no inferiority, nothing on which to ground authority, save physical power, which does not impart excellence of character—direct maternal influence is gone,

but the mother watches the unfolding of the dispositions she has imparted, and guides them by her counsel.

But by some the fact of the chastity of the Irish women will be doubted. Evidence is at hand. Irish families, competent to give information, are every where to be seen : the opportunities of inquiring into the fact that have presented themselves to me I have availed myself of, and the testimony of all, however different may have been their own characters, have borne testimony to the excellence of their's. The condition of the family of an Irish peasant is not itself calculated to produce a refined and sensitive modesty, so conspicuous a feature in the character of the great mass of females, their cabins, without separating walls, form no distinct apartments—one area gives accommodation to the family, and is the sheep-fold and the pig-stye. Amidst such grossness are they virtuous? do circumstances so revolting not brutalise their minds? Certainly they do not. The mind, in this low state of civilization, is so constituted that ignorance and custom are its safeguards. The children of a Hottentot craal are in a situation still more degrading; with them dress is not used till the period of youth approaches, yet vice does not characterise their manners, their conduct is not debased, their condition is not the nurse of crime, for when it does not exist in the mind of the adults, it does not in that of the children. The same principle that guards the Hottentot children guards the Irish—they are not exposed to the influence of the depravity of others : poverty does not destroy integrity of mind, for, however

mean and abject the condition of an Irish family may be, vice is not a resource by which they seek to relieve its distress, or to compensate for its privations. The objects that rivet the mother's attention are the proper care of every mother—that of the well-being of her children—by her they are protected from the influence of other mind's, for she presents her own ; no vicious associate, no improper nurse gains their affections, no baneful feeling ever reaches their hearts, and the seed nature has sown there, makes its first shoot in the way in which it is directed. When a corrupt heart has not shed its malignant influence, a mother's love brings forth the mind inclined to virtue, for virtue is still its natural bias, that alone which comports with its dignity, or can discharge its duties. Was it not thus ? was vice its element ? did it spring up spontaneously, and in its rise be unopposed, and did no check hold back its influence ? then, indeed, it would be natural to the mind and form a part of it ; then virtue would be an acquisition, chastity an artificial state and character of the mind, while all that is gross in vice would claim the smite of conscience, for that which is natural claims the protection of its appointed safeguards—to banish virtue from the mind as an element is to destroy it—it is a principle, or it is nothing. That only can harmonise with conscience which harmonises with the discharge of the relative duties of man—and is vice a duty ? and is virtue a stranger to the mind ? This is not the character of our depravity, vice is not our nature ; we think it is, and therefore are not alarmed at its approach. Chastity, with other virtues exist in the

heart, as original and inherent qualities ; vice is also there, it exists in its elements, but they are also passive, and want a kindred influence to give them birth. From the state of our knowledge on this subject, no passion comes into exercise but by sympathy—none have a spontaneous developement.

THE SUBJECT CONTINUED.

The preceding truths are fully confirmed by the history of animals ; when brought up by art the dispositions proper to the species are obscurely seen : a pet animal, the play-thing of a child, receives a new direction of its feelings, and looses its natural character—domestic animals, living together, form sympathies and attachments strange to either. Thus a cat and a dog become fond of each other, by the friendly disposition of one, not having its proper object, being directed towards the corresponding disposition in its associate—they forget their original dispositions in the sympathies themselves have created. In the human race the truth of the remark is not less seen, especially in those that have not known a mother's care : it was seen in Peter the Wild Boy, and in Caspar Hauser, to whom sympathy had not paid the tribute of a mother's fondness, or even made her voice familiar to their ears, or drawn from her smile a beam to gladden their torpid minds, and scarcely could they call a virtue or a vice their own—no thought illuminated their minds, no passion animated their feelings—forced into solitude, they never felt the excitement of another mind acting on their own, and therefore they knew not that they were men ; no sentiment governed, no principle directed their actions, their

direction was instinct ; unimproved by the experience of others, or assisted by their own, they grew up quiet, harmless, inoffensive human beings, demonstrating the destitution of our nature, and the influence the mind of man has over that of his fellows, in modelling their disposition and in creating their character.

In some barbarian tribes one passion predominates, in another one of an opposite character prevails, because circumstances have favoured their formation ; the individuals of either tribe so strongly resemble each other as to fix the cause in the uniformity of their influences engendering a uniformity of disposition and habits. To ascertain their leading disposition is to ascertain their leading vice. Tacitus observes that those German tribes that were most domestic were the least warlike. Passion kindles passion, and expresses their respective virtues and vices, and thus man acquires his general character. Did no mind, worse than that on which it acts, excite the passions to insubordination, lust would be unknown ? Did not anger provoke to anger, it would not be a passion, for all passions are sympathetic ? and did not virtue receive succour from the mind it would not be virtue ? When impurity presents itself to a contaminated mind its power is felt, but if imbued with the chaste influence of a mother's affection, vice has a conquest to make, for it must first create a disposition similar to its own—passion must destroy principle. By association the mind is formed ; without association, without intercourse with his species, man is a passive being, uninterested and uninteresting, alike remote from good or evil, from virtue or vice ; this character

is approached in a child nursed by a phlegmatic, heartless person, its virtues are as water in the state of ice, they cannot be said not to exist, but it is the existence of death, and not an actual existence, nor are its vices more active : with such a character energy of mind and generosity of feeling are incompatible. On the other hand, a child, nursed in the atmosphere of vice, does not escape its contagion ; an adult is conscious of its presence, and, if it be thus with a mind prepared by experience and fortified by principle, it cannot be unfelt by an infant, open to every impression. The children of a savage are in disposition savages—the die of infancy cannot be effaced. The daughter of a chaste mother, brought up by herself, is chaste ; she who has implanted her physical image, implants upon it her mental and her moral. The mother who gives to her child her continued attention, sows seed which, in a mysterious way, ripen as years advance—when they are those of virtue, they meet a genial soil and repay the mother's care. If her mind be chaste, so are their's ; on the contrary, if vice be sown, the will lends to it an overwhelming influence, and gives to the morbid passions the power of its strength, in subduing the resistance of the moral feelings of the mind—no passion is inordinate till the will has made it so, and the will is little more than another name for selfishness ; it is not a principle of our nature but its corruption. The struggle of vice to overcome virtue is characteristic of man. Is it without an object that he completes a character, and is he never to live in and act upon it ? Why then is he ?

Perhaps to some these remarks may seem opposed to the dictates of Scripture, or the state of man—they are not opposed, but, it is presumed, are in accordance with it. Man is depraved, he is also accountable—he grows up a thief or a murderer, a drunkard or a libertine, or he exercises the opposite dispositions, as he is brought up. To the sixth year of a child's life, the development of the mind, and the direction of the heart, rest with the mother; all the influence an animal has over its young, she has over her children, every faculty that she possesses has an influence on that, which, in the young, has not appeared, but which exists in a dormant state.

But, it may be asked, can a child, under any circumstances, be made entirely vicious or entirely virtuous? He can be neither, because the beings that surround him are neither. An infant, whose vicious capacity had never been called forth, may, in another state of being, possibly not know that it has existed, but in the society of man its appearance is inevitable—the evil latent in the heart, is kindled by contact with the evil in another's.

All that it is here intended to state is, that man is a fallen spirit, in whom, amongst much of evil, virtue is not extinct; that it admits of cultivation and improvement beyond our supposed capacity, yet without changing the nature of man. By the cultivation of a virtue, the vice opposed to it is resisted, and kept inactive, but this can only be obtained by calling forth the virtues, before the vicious propensities are acted on—original sin is the cloak with which parents cover their neglect of duty. It exists. Man is a fallen spirit—

the elements of sin are born with him—he is born in sin and cannot eradicate the principle, but he may suppress it, he may acquire a moral bias, he may approve of virtue and practice it; beyond this our subject does not lead us. The Scriptures are plain upon the subject; they also state the means of man's recovery, from the taint of sin with which his nature is imbued. Read them.

We now return to the character of the female Irish. As mothers, they are devoted to their children, and are a striking illustration of the extent of such influence. No children are more obedient, none more respectful, none more active or happy, none more strongly show how much may be accomplished by sympathetic influence, through the operation of instinct, on which, unhappily, the Irish are, in a great measure, dependent. Science and literature have not yet unfolded their minds, when this shall have been done, Ireland will rise as a pyramid among the nations; although illiterate to a proverb, they possess a virtue which will give a beauty and a direction to any which may be acquired: amidst poverty and wretchedness it diffuses a buoyancy of character, which a life of unmingled adversity does not destroy; it infuses a refinement of feeling, a delicacy of mind, which it is difficult for the school to communicate. An Irish female, with a tarnished character, commonly hides herself in some other country, hence the national character is not so well maintained as at home; but at Manchester, where there resides about sixty thousand Irish, the women are, notwithstanding their circumstances, chaste, and their manners delicate and courteous.

The attention of parents cannot be too earnestly called to this subject, that the character and disposition of those they intrust with their children may be better attended to. A child, judiciously nursed, is easily educated ; obedience becomes a habit, the mind acquires confidence, the disposition kindness, the road to the acquisition of knowledge is laid open, and needs but the well-directed aid of the master to establish a given and prescribed character—uncertainty as to the result, ought no more to exist in Education, than it does in training an animal. The instinctive character is dependent on the bringing up, and the moral is founded upon it.

It would be invidious to adduce instances of individual characters being formed and corrupted by their nurses, but it is easy to be informed on the subject ; and by referring to animals, it may, without difficulty, be illustrated. Every passion offers an example, but that of personal courage is the most prominent ; we select it, and instance the circumstance of the battle between two lions, and a number of dogs, at Birmingham, a few years since. Nero, one of the lions, was bred in a forest, and caught, I believe, when a cub, and, by the care and good management of the keeper, became tolerably tame ; when the dogs, in their savage fierceness, were brought to the attack, the lion shook off its tameness, the tameness of restraint, assumed the majesty of its nature, and in an attitude of courage surveyed its enemies, and as they approached with its massive jaws grasped them one by one, and they perished at its feet ; but Wallace, the other lion, more noble in appearance, was bred in England ; no

lion of the wilderness inspired it with courage, or impressed on the cub its own disposition ; the energy and the vigilance that liberty associates with itself, and which danger inspires, were unpossessed—it had drank into it the tame, the broken spirit of its dam, and the pride of its species was unfelt and unmaintained. When the dogs were unchained, and the door of the cage opened for their onset, Wallace was with difficulty roused to resistance, and then it was but the resistance of a coward—the spirit of the race had fled and an ignominious death threatened the animal.

Whence this marked difference in the spirit of the two lions ? their treatment had long been the same, but, in the first few months of their existence, it was not so, and doubtless, at that period, their characters were formed—those that supplied their wants commanded their dispositions.

Suppose the influence of a mother over her child to be as that of an animal over its young, and is her power unimportant ? Or suppose it to be not more than a foster dam's, does she not bend the disposition of those she adopts to her pleasure, and fix the rudiments of their character ? But the nurse goes further, and mixes intellect with instinct, and thus it may be implants a mean and selfish character on a mind of noble birth. A mother's and a nurse's influence cannot be less than that of an animal's, it would be strange if, in this respect, she was their inferior ; that while they implanted their character, varied by circumstances but directed by instinct, she was powerless ; that her instinct and her intellect were confined to herself and incommunicable, and cast no shadow, implanted

no disposition, removed no impediment, or in any way influenced the future life of those connected with her. Would not an infant Tartar, or an infant Hotentot, nursed by a kind and intelligent European lady, discredit this remark, by manifesting different dispositions and mental tendencies, than if nursed by their mothers? and where is the power, where the principle that can erase the impression? Does the nurse neither deteriorate, nor improve the character of the child she loves? A Persian of noble birth was never nursed by a slave, or by an inferior and mean person, it would have been deemed a degradation; but in Europe this influence is disregarded, this laudable pride unfelt, the character of the nurse is set at nought; but if she can impart to a child all that an animal imparts to the young of another species, she can direct the natural current of the child's feelings, and taint its passions, these will pollute the mind.

Some will say this is mere theory, a mere hypothesis. Let us trace back the subject. Female affection, that affection which is proper to the sex, imparts to a child the knowledge that the being it needs exists; the feelings of instinct are thus gratified, and the child and its mother are one. To a father sympathies of this nature are unknown, his love of offspring, as Lord Kaimes remarks, is not an original passion, but consists in the love he bears the mother being reflected on her child, and is the continuation of a passion already existing—it has but one object and one character, that of sympathy with the mother in her relation to the child. The birth of his child calls no new passion into existence, illegitimate offspring do not

know a father's love, and because he never loved the mother, he now neglects and despises both. The affection of the parents to each, other ties them by different influences to their children, and imposes on them different obligations. The impressions a mother now makes give life to a series of dispositions, which appear in the developement of the character. The being of a father is scarcely known in childhood, and his personal assistance rarely desired, except in maintaining the authority of the mother; he has no instinctive influence, no direct power to communicate from himself, but a few years having passed, his duty commences, and the child is conscious of his authority and of its dependence, and looks to its father for protection and instruction. The formation of the character was commenced by the mother, while the father had no influence, and he is privileged in being so assisted, for, comparatively, little ought now to remain to be done, but to supply the mind with knowledge, and make it practical, so that it becomes common sense in its application to the business of life.

When the mother's duty is neglected, the morning of life is lost, and the father's efforts are unimportant, because uninfluential; he may instruct, but cannot implant, the character has already received its direction, which he can strengthen but not destroy. Thus the nursery stands foremost in the great business of forming the mind—compared with it, the school occupies a secondary place. Can the school form a gentleman of a clown? a benevolent man of a churlish boy? a virtuous man of a child already corrupt? Can it efface the embossed lineaments of the nurse's mind?

More than instinct is implied in maternal influence, and more is communicated, more implanted by it than can be wholly plucked up—a foundation is laid which only admits a building of a certain structure. If maternal influence be admitted to exist, what, it is asked, is its power, if it be not the medium of communication with the mind of the child? who has no resources, no innate strength, and cannot be given up to its own direction, for absolute helplessness is its condition, even language has no meaning, for sounds, except those uttered by instinct, are unintelligible, and instinct has no influence as mind—it is not mind, or animals would think—no latent, no hidden principle waits the unfolding of its powers by the force of circumstances, or education would be unnecessary; nor do ideas force the mind to reflect, and so constitute rationality or insanity, or delirium could not exist, ideas must even lose their relation to facts before the mind is lost; nor does it burst forth in the fulness of its strength, but its commencement is feeble and its advance slow, irregular, and uncertain, ever needing assistance and direction from minds of greater strength through its whole course, from its nascent state to that of its greatest vigor; and from whence is this, in the first instance, if not from the mother? she gives strength to the principle in the dawn of its power, by communicating the signs of thought in the language of the country: and how does this convey thought? it is not in the sounds themselves, but in the capacity of the mind to receive impressions corresponding to those in the mind of the person who utters them. To an adult sounds become

familiar by habit, and are readily understood, but an infant has acquired no habits, no regard for sounds, but as they are accompanied by its mother's sympathies ; aided by them its mind struggles for existence, these are its aspirations after life.

Instinctive affection regards only the continuance and well-being of the species, and terminates when these are accomplished ; but a mother's affection follows its object beyond the period when instinct fails, and regards the whole being of the child—a mother knows that her influence is greater than instinct's. If this influence be disregarded, and her power doubted, by what means do the faculties of the mind, and the dispositions of the heart commence their development, and receive their bias ?—it is not spontaneous. Instinct, indeed, appears unsolicited, and by its own essential being, but it is only in the outlines of its power that it thus directs ; to eat and sleep, and to practice the ordinary requirements of nature, are of its dictating ; but it is taught to meet the circumstances and embarrassments of life—it cannot detect a trap, or discover an enemy, unless instructed—a bird, bred in a cage and then set at liberty, knows nothing of the sensible properties of surrounding bodies, and injures itself against intervening substances. Instinct is educated by the experience of the senses, to accommodate itself to passing events, and this is taught to others, by those who are initiated ; but the province of nature by which this is effected, is unknown alike to the teacher and the taught—to those who are its instruments, and to those who witness its operation. If *it be thus with instinct, if its acquisitions are*

communicable, if some individuals are aided by the attainments of the instinct of another individual, is the faculty of reason without a hidden power, without a secret influence, which steals its way and makes a lodgment in the minds of others. What is conscience, which every one possesses, but such a power? Is it the result of reason? No, for reason could never draw up the code for conscience; reason is appended to it, as experience is appended to instinct, it increases its power and manifests its character. Conscience gives to man his free-agency—the will makes no man free. Conscience is an elementary principle of the mind, the jealous scrutinizer of the will, it requires the body to be developed, the passions to be free, the all-controlling influence of the mother to cease, that it may show to man his freedom, and thus establish his responsibility. Conscience sheds its beams upon his path, and he sees his way, but what is the light it gives? how does it influence and direct the mind? how does a mother guide her child, but by an appropriate influence for an appropriate end? So conscience guides; it may be said it is excited by memory, and dependent upon it. Granted—but memory is not conscience—it is but the means, the agency by which it is put into operation. Conscience waits its impression, and is unknown without it, and is as much a dormant power as the reasoning faculty in an infant. The conscience of Peter the Wild Boy was like his reason, uncalled into operation; it needed its appropriate influence, which, being withheld, it gave no signs of existence—had the mother roused the faculty of reason, the same faculty of

reason would have roused the conscience, for what scares the guilty mind? is it some bugbear? a fancied presence? is it a dream? No, it is not these, by a moment's reflection they are gone. It is the vision of that portion of our nature which has not sinned—that which the will blinds but cannot pervert—if awake, it goes to the recesses of the mind and unmasks its motives. This is conscience.

This faculty is only known to exist when infancy is passed, when motives give to actions their character: such is the constitution of our nature, that this portion of the mind waits the exercise of reason before it appears. The passions and appetites have been under the influence of instinct from the dawn of life, when conscience was unknown, for instinct had not called it forth, it had no power over it, and its influence had not been felt; is it strange, and offensive to reason, that its imbecility at a period when all the energies of nature are comparatively powerless, should need another mind to act upon and succour it? Conscience has no power till the mind is free, and is the incipient state of the mind such that it needs no care, and has no government, and is susceptible of no influence?—nothing is abandoned or left to its own helplessness, means are appointed where an end is to be accomplished. Creation is perfect, nothing is overlooked or unprovided for; and, admitting that the moral and intellectual character of man be the purpose of his creation, nothing that relates to their formation is without efficient aid. Conscience is the standard and test of man's moral, and reflection, on first principles, the means of

the improvement of his rational nature ; and in both these cases the means are appropriate to the end, and are ample in their supply : and is it contrary to nature, or is it opposed to the Creator's system of government, that whilst the dispositions of the heart are incipient, and the reason but in anticipation, that a power should reach them, that their susceptibility of impression should be met by an adequate impulse ? It is contrary to nature, that while in youth and in mature age the means of mental growth are provided, that some are adapted to an earlier period. Must man come forth from the cradle of infancy wholly unprepared to resist the evil around him, and which allures, by administering to his selfishness ? Then man might ask why was the period of infancy appointed, if it be a mere blank ? a useless space as it respects the mind, but one most fertile as it respects the growth of selfishness and the dominion of the will. A mere glance at our nature, and at the government of the Creator, will direct the mind to inquire into the provision he has made for this portion of our life, and to ask by what agency it is administered Is it not by the Mother ?

OF HEREDITARY CHARACTER.

That national character is the effect of circumstances history abundantly testifies, but in what way they operate is worthy of inquiry. Circumstances long existing, produce habits corresponding to them, these may not otherwise be hereditary than by being taught by a father to his son, and thus an aptness and a facility is acquired which advances the family to distinction in their line. The pearl divers remain uninjured under water longer than the life of an inexperienced person would be sustained, but that which requires to be learned from another, or gained by practise, has no claim to being hereditary. Habits, that increase the physical capacity and give an express constitutional bias, can alone be admitted to this distinction. The drunkard, the libertine, the miser, and the thief, propagate their dispositions, they are therefore hereditary—habits, not mechanical, but such as are connected with the passions, or the mind, give a constitutional propensity or leaning towards certain practices ; and a constitutional bias, so influenced, descends to posterity. Whatever gives a character to the blood, gives it to the disposition ; a person, accustomed to take animal food, debarred from its use, at once feels the effects, and is only restored to his former state of health and feeling by

returning to his accustomed diet—thus the blood occasions a sense of vigor, or of debility, as it is supplied with food. The passions influence the blood by their power over the secretions, and the mind by its power over the brain, the source of nervous influence and muscular action; and can it be difficult of belief that the character of the blood becomes hereditary, and gives a bias to the constitution and even to the form, the immediate effects of which circumstances may correct, but the disposition exists in the system, and is not driven out till another becomes hereditary.

Man is so compound a being, that the effects of physical causes are not so evident in him as they are in animals, these will therefore best illustrate this branch of the subject, and show to what extent acquired dispositions become hereditary. No domestic animal retains the form or the disposition of its wild state, these are given up and yielded to circumstances, and circumstances again restore them, so that in a limited sense only, they become hereditary: the effect of domestication on the sheep and the dog, and other animals is so great, that it is with difficulty the original stock is traced, every valuable quality, or propensity, or disposition of the animal is made the subject of express cultivation, so that a distinct variety indicates a single property—one sheep has a finer form than others, another has a greater disposition to become fat, another is distinguished by its wool, and this again is branched out into many varieties, from the long wool, so peculiar to this country, to the short and delicate Merino, so highly cultivated in Spain.

These leading dispositions, with such as are intermediate, have been branched out from the original stock by the influence of climate, soil, and food, and by the management of the proprietor, who, on discovering a lamb with any property which is deemed valuable, notices it, and if its young possess a similar quality they are preserved, and, by the management of the shepherd, a variety is thus established. The long-wooled sheep arrive at the greatest perfection in Lincolnshire, where the land is flat and finny; other varieties are best promoted in hilly countries, or on dry soils, but the care of the farmer is the leading means of preserving a valuable property, when this is withdrawn the flock soon acquires but one character. The dog is seen in more varieties than the sheep, because it has more dispositions, and tempers, and capabilities of usefulness; of these the lap-dog and the blood-hound are so opposite in all that characterises them, as scarcely comports with the adhesion of nature to her purpose. Some of the capabilities and endowments of the dog are so cultivated that, in a wild state, the animal would not be able to obtain the means of subsistence. The greyhound is of this class, its sense of smell has been so little employed that it is now not sufficient to discover its prey, and its sight is not used for the purpose, so that an animal must first come from its hiding place, and be conspicuous, before the greyhound is attracted by it, but as feeble animals are timid they avoid their enemies, and thus the greyhound must subsist on insects or perish. The lap-dog is still less able to administer to its own wants, set

down in a forest it would be the derision of nature ; which forms nothing without a capacity to provide for itself.

Such varieties are the consequences of cultivation, and they fall back again and are lost in one common mass, when care is not used to prevent it. The pointer and spaniel, and every other variety of the dog tribe are unknown in their natural state ; their faculties are common to the race, but cultivation has so much increased them in these animals that they are designated by them : both have a strong and delicate sense of smell, but discipline has taught the pointer on approaching game, to tread slowly, and without noise, and, on being certain of their presence, to stand still in the attitude of observation—the spaniel follows the game barking as it goes. The young of both these animals partake of the dispositions which art has imposed on the old, and which now have become hereditary ; no discipline or care can make them act each other's part ; the pointer, that always hunts in silence, cannot be taught like the spaniel to move cheerfully or barking at every step, nor can the spaniel be taught the gravity and sobriety of the pointer. Dispositions so marked, are a sufficient evidence that habit in the old, produces a physical tendency in the young to do the same thing ; the young pointer has dispositions which were originally forced upon the race and acts upon them—the same remark applies to the spaniel.

Carry the remark a little further, and ask whether the good and bad dispositions of men are not subject to the same law ? and whether we do not perpetuate

in our children, the dispositions that prevail in ourselves? for not only are the natural endowments propagated, but defects and injuries have their influence, the physical system readily assumes to itself and propagates not only the disposition and temper, but the symmetry or deformity of the body. Dr. Coventry mentions a cat whose tail was wantonly cut off, and in every subsequent litter of kittens one at least recorded the fact; and Dr. Anderson, in his "Recreations," mentions a sheep with a crooked back, whose lambs had the same deformity.

But, notwithstanding this disposition to make hereditary that which design had imposed, nature is ever disposed to resume her original character. Varieties, produced by physical causes, have no absolute harmony; another order of circumstances produces new varieties, and thus, what appears to be hereditary, is only an illustration of the pliancy of physical nature to yield to any effort that may be made to deviate from her plan. But while every disposition and faculty admits of being cultivated, and of being diminished or increased at the will of the cultivator, when he withdraws his vigilance and care, nature receives again from the climate and the soil the qualities they impose. The sheep and oxen, which have strayed from the pastures of New South Wales, are acquiring the properties proper to the place. The wild oxen, in the plains of South America, have gained an energy in their appearance, and a quickness in their perceptions, and an activity in their movements very different from what exists in the European stock, from whence they descended.

But, however incomplete the physical system may be in its hereditary character, enough is evident to constitute it an important agent in Education. If it requires continued attention to retain a given influence, it must be given ; education supposes its need, and it is only commencing the application earlier in order greatly to facilitate the result. It is not thus with the mind, it has its own laws and its own permanency, and in this shows its most entire independence of the body. Here arises a great difficulty, from whence does the mind descend, and how can mind, in its descent, lose itself, and become without energy and without knowledge ? Mind is not formed of parts capable of uniting with parts of another mind, and so forming one—mind has no character of this kind, it is one spiritual existence.

That which is physical, is sustained after its own nature, a physical origin supposes a physical growth, but mind knows no such influence ; that which thinks cannot be composed of that which does not think, nor can it be composed of a weaker and a stronger mind ; minds cannot amalgamate, one mind cannot be reduced and weakened by an union with another mind—the idea of a compound spiritual existence destroys the character of spirit. The mind is more or less informed, more or less capable of application, as it has been cultivated, but its essence is one, its descent one. How mind is generated, how it should have increased from a single pair, to hundreds of millions, existing at the same time, and passing away in successive generations, is from its very nature, beyond the penetration of a mind that constitutes one of the number.

Mind cannot comprehend itself, or determine its origin, we leave it as a mystery, and are satisfied with knowing, that its laws and its operations are distinct from matter: the body can only aid the mind when it is subdued by it, no cultivation, no course of discipline prepares the body for mental exertion, the mind itself acts, and subdues the body to its authority; the body of the ignorant does not push on the mind to study, polished manners, and cultivated feelings, are not incompatible with ignorance, but may be connected with it; but a mind made strong and vigorous, prepares the body to admit of its advance, and by suppressing its feelings, overcomes its power—so that whilst the mind is in exercise, it is, in a measure, unconscious of the body, and its decisions are ungoverned by its feelings.

But, although the mind cannot be traced further back than the period of infancy, its after progress, the power it possesses, and the duration that power indicates, are open to our observation, what principally concerns us is its hereditary character. Were the minds of the children of every generation equal in capacity, where could improvement commence, not in the accumulation of ideas, this is made by animals, who never have essentially advanced, or ever will; the exercised mind is improved, but if succeeding generations be not benefited, if the world has gained nothing, if with the individual his attainments die, where is the good? The knowledge of one generation is the property of the next, but should the capacity not be of strength to receive it, the right is a *mockery*; always to commence with the same capacity

is to end at the same point, acquisitions are without fruit, if the capacity does not descend with the mind. Man requires more than a knowledge of facts to be rational, he requires principles, which the mind, in an early stage of civilization, is unable to comprehend. How, then, are they gained, but by an accumulated capacity? The mind, by exercise, strengthens, and is this to vanish with the generation, and is that which succeeds to be but the image of that which a thousand years since passed away? If so, nothing in mind is hereditary but its existence, nothing but its barbarism—but what is the fact? Two thousand years ago the inhabitants of Britain knew not a science, nor were their capacities sufficient to comprehend one; but, in subsequent generations, the same people traced the operations of nature to their source, and established scientific principles, which, to the present generation, are easy of comprehension, their capacities are enlarged beyond their ancestors, and that which was then impossible is now common; one generation has aided another, the capacity has increased with the succession—and what is capacity but the power of thought? This power is now greater than it once was, how has it become so, if the mind knows no increase, if it has within it no principle of growth? Without such a principle what is it? It is not mind—it is not that mighty energy which sees eye to eye with the Deity—mind can only cease to increase when it ceases to act, and is it according to the analogy of nature that that which descends is deteriorated? The mind has grown, and what can hinder it, and that which was part of itself inherits its

properties ; to increase in capacity is to add to itself, and what is the purport of the increase, if the mind of the child has no reference to that of the parents ? If it necessarily commences in barbarism, and has no greater aptitude than is common to that state, it is asked, if there be any possible way by which the present generation can have advanced to the eminence it now occupies, had not that which the mind had realised, and made its own, descended, as constituting a part of it, and thus mind, in the most perfect sense, has become hereditary ?

The more elevated families of Russia, for some generations, have been educated by masters of the first eminence, and reward their care by their knowledge of the sciences, and by their acquaintance with literature ; the children of the present age, surpass in capacity those who in Peter the Great roused from their long sleep of ignorance, and pointed to Europe for an example of the rank they ought to sustain ; but though the effort was strenuously made, and is still continued, the children of the present generation do not equal in capacity those of older states. No Russian mind ever yet originated a thought, or in any department of literature has taken the lead, or even lends a helping hand—the mind has not yet attained so great a capacity.

This remark is not intended to be invidious. Every nation emerged from barbarism has been open to the same ; all have been shepherds, and have passed through this first effort to obtain in property a greater certainty of the means of subsistence, a greater security against famine. But this state cannot continue, envy arises,

and forces on those circumstances of society, at which the history of the Romans commences, who, according to themselves, were robbers and half-barbarians. After this follows a state of more efficient agriculture, and of fixed residence, which engenders many wants, and greatly increases an attention to the arts. The next decided advance is to the age of imitation, that age in which this country was a thousand years ago, and in which Russia now is ; an age in which every thing is copied and in which nothing originates, an age of admiration and wonder. Persons are surprised at themselves having effected so much, and the public gives them applause ; no persons are so highly esteemed, or so well rewarded, as those who appeal to the credulous ignorant. Architecture, or painting, or the most refined and delicate arts, meet with a hand among the half-polished mass, that can retrace its lines without error, and imitate its beauties without inferiority ; hence the monuments of this age are the ornament and boast, of the subsequent generations of every civilised country. Public buildings, which still exist, bespeak a degree of knowledge not then existing in the countries which possess these monuments ; but their artists had the good taste to admire in others, what they could not themselves design, but which their hands could imitate ; an evidence of growth but not of strength, of an advancing, but not an efficient capacity—they excelled in execution, because undistracted by a desire to improve or invent. The chasm between the capacity to imitate, and that to originate a style, and form the means of sustaining and giving it duration, is as wide, as from the shooting forth of

the bud, to the ripening of the fruit—to copy, is rather a physical, than an intellectual effort, a mechanical, rather than a mental act. The man who originates, impresses on his operations the character of the principles he understands—he that imitates needs no character. The next stage of a nation's growth is that of Poetry, imagination succeeds to imitation, and much complacency is the result ; those who excel receive the nation's highest reward in its gratitude. After this the Augustian age places the top-stone on a nation's greatness, but it is insecure, luxury has always undermined its strength, and it has fallen, but it has never yet been ascertained how far education, aided by moral principle, may sustain a nation in its greatness, and perpetuate the manly sense by which it rose—another generation may determine this important question.

It has been stated that every disposition which rests on physical causes, although readily propagated, is not absolutely hereditary, there being a constant tendency in all organic matter to assume the character and properties which existing circumstances are calculated to impose, and that the mind alone has, in itself, a perpetuity of character, which cannot be destroyed by circumstances, or lessened by descent ; that it admits of increase, but not of diminution ; consequently, mind is in the full sense of the term, hereditary.

But before noticing this subject, in connection with the preceding facts, it may be proper to inquire into the objections which have been raised against the principle. It is objected, that in every family there are as many

shades and diversities of character as there are individuals. Granted—but is not the mental, often confounded with the the physical character? Animals shew an equal diversity of disposition, which is indisputably physical ; children have constitutional differences, which are seen in their pursuits, and in their tempers, but this is not mental ; one child has a delicate, the other a robust constitution, the one is circumspect in all he does, the other, full of vigour, braves every difficulty that arises in the pursuit of his object—each is characterised by the bent of the inclination and the disposition of the heart. While at home they display two characters, and at school their progress is unequal, but their education being ended, the strength of mind is found to be alike in both ; suitable management has led on the delicate child to the full exercise of its powers, it has been careful of its health, and minute and punctilious in its actions, it bent its mind to study, because of the master's kindness. The other child, hardy and daring, studied only in obedience to the master's authority : a quick instinctive apprehension aided in gaining the daily tasks, but the youth's mind, being otherwise occupied, they were as speedily forgotten ; as life advances, and subjects require deliberation, the judgment of both is often found to be equally strong and decisive—there are instances, many instances, where it is not so, when there appears an inequality of mind. A defective organization, gives to the mind a defective operation, but two individuals, selected from the extremes of society, will explain the cause—neither are cultivated, and both are alike defective in ability—

yet it will be manifest to what class they individually belong—the quickened sensibility of the gentleman, will be traced in the deportment of his son, and the stupid vulgarity of the clown, in his immediate descendant. Suppose these children educated at the same school, and that, in attainments, they are equal, will their origin be obliterated? will it destroy all distinction, so that the son of a clown will be mistaken?

It is admitted that the children of the same family are individual in their characters, each has its own, but all are identified by the class to which they belong, all maintain the same rank; those that stoop do it to command, they feel and manifest their knowledge of their proper station—the son of a gentleman, in any circumstance, is not concealed, nor is the child of an opposite character. But these distinctions are physical, rather than mental, they are, in fact, of the same nature as animals exhibit, the same dispositions and propensities of man and animals as seen in their young. The origin of a race-horse is never obscure, nor is that of any other animal. To man the mind is added, and it also descends. In a tribe of savages all the diversities of character that are seen in a civilised family are found, but their children, when brought up in connection with Europeans, never, in capacity, rise above their tribe. Present circumstances do not constitute the difference of capacity, habit must train the mind to thought, and thought will ultimately refine the body, together they present an insurmountable barrier to a sudden elevation of rank—education does not instantly equalize a negro—

children born in Europe have the dispositions and capacities of negroes, advantageous circumstances avail nothing, and are not embraced, there not being a capacity to appreciate them—every people illustrate this fact, for civilisation is progressive, and embraces the mind with the body. Individuals have risen from poverty to affluence, but their walk in society has not effected a mental elevation, they still are peasants; others have shewn themselves equal to the requirements of their new station; in the one case the family had acquired no previous character, and had no station among their equals to maintain, the other, had been under some mental discipline, and felt their responsibility to their children, who thus entered upon life with an object before them, to the pursuit of which character was essential: trace a risen family to its origin, and it will be found to have taken a part in politics or religion not on the dominant, but tolerated side, which made it imperative in them to fortify their children's minds to meet the opposition they would have to encounter, thus strengthened they are prepared to fill an advanced station in society—no family has preserved its station that was not prepared to enter it by maternal influence.

Another, and most conclusive, because best ascertained fact is, that although engulfed in poverty and neglected, rank is never yielded up by the individual: the mind, undiminished in strength, unchanged in character, descends with the body from generation to generation, adversity may reduce the individual to beggary, and education be so neglected that gross

ignorance may obscure the faculties, yet neither the body nor the mind sinks in capacity, the physical character is maintained by the mental, and the mind cannot lessen—adversity may destroy its energy, again it descends unbroken, and waits more genial circumstances to bring forth its former brightness.

Many exiled families illustrate this remark, for none are exiled whom energy has not made conspicuous, and whose subsequent poverty has not often forced into the lowest walks of society, but they have risen again—cultivation gives a buoyancy which ever maintains its position. How can mind diminish and wither, is it by the decay of the physical faculties? No, this prevents its increase—it also prevents its operation; the instrument is untuned and its melody has ceased, but the genius of music has sustained no injury, it needs but the instrument. It is thus with the mind—its existence is in itself, and were the whole race idiots, the first child that possessed a natural body would inherit the mind of the last of its race that possessed that faculty. Do not generations often pass in succession, without an individual appearing distinguished by a talent the family once possessed, which, however, has not been lost, for it again appears and marks its descent by its resemblance. None who have been cultivated, sink in disposition to a menial station; not because this station is discreditable, not that if all were educated, none would fill it, but because it may be occupied by the ignorant, and therefore it is abandoned to them: education does not elevate above any station, that which is useful to society

is honorable in it, but if in any station intelligence be not required, the intelligent will not seek to fill it. Physical causes produce many shades of character, many aids and hindrances to the exercise of the capacity, but who is acquainted with the family that in two generations had been educated, and again became peasants?

THE SUBJECT CONTINUED.

It may here again be remarked, that education disqualifies for no office, or raises the mind above no duties, but when a few only of a nation are educated it excludes them from situations in which education is not required—they can be more profitably employed. The form and construction of the brain, is also a powerful cause of the diversity of mental character. Phrenologists are sanguine in the belief that much practical good will result from a patient inquiry into the subject ; already many curious, and some valuable remarks have resulted from their labour. Every prominent, part they believe to be the express residence of some active principle, some attribute of the mind, which either creates the feeling, or is congenial to it, and which indicates a predisposition to succour the particular propensity.

Without inquiring how far the theory is just, it may be admitted that the head, in common with other organs, has a form best adapted to the discharge of its functions, and, it may be assumed, that a head equally full in every part, or, in the language of the phrenologist, fully developed, is that form. That head is imperfect whose energies are concentrated in one point ; (excess in one part supposes a deficiency in another) but too little is known of the relation

matter bears to the mind to arrive at any satisfactory conclusions. A perfect form, one that harmonizes with the body, indicates much intellectual strength, but whether the love of money, (acquisitiveness) or any other disposition or propensity, has a prescribed seat in the brain, or whether the heart may not contend with the head for its residence, are probably not yet ascertained ; but however imperfect phrenology may be as a science, it is not without great interest. If the prominent parts are indefinite in their expression, it is not so with the sunk, and depressed, and defective parts, these to the physician, if not to the phrenologist, are of vast import : a small cerebellum is indicative of a weak and feeble system, from this organ are derived the nerves that chiefly supply the trunk of the body, if the origin be small, so will that be which is derived from it ; idiocy, and insanity, are both indicated by certain defects in the formation of the skull, and the whole range of nervous derangements have their distinguishing marks and indexes. It is probable that every deficiency or redundancy of the brain influences the disposition, for the seat of the nervous system is that of sensibility, on which the disposition depends, and with which it harmonizes : a limb, defective in form, can only be used in certain directions, for certain purposes, the same is true of other organs—it is true of the brain. This organ is not that of which it is the seat, it is not thought, more than the heart is life or affection, but it is an organ without which, thought is unknown, in which it can be exercised to a certain limit, and there it terminates ; the organ is inappropriate to its extension. But it

must be obvious, that thought itself admits of no such boundary. Is there no thought without organization? Then man alone in the universe thinks, we know of no other organic being that has power to think—thought is communicated, and therefore is as distinct from the body, as life is distinct from the limb.

There are other difficulties in phrenology which require an explanation before it can be connected with the progress of civilization, in other terms, with the hereditary disposition and mental strength. The head, after birth, admits of every form accident or design may impose, and the capacity be uninjured. The Charibees press back the foreheads of their children, who lose nothing of the fierce and determined energy of their ancestors. No subsequent developement of the compressed organs takes place, yet the dispositions are not lost, the character exists where the organ is not. The heads of all children are influenced in their form, by the habits of the nursery. Every nation has its mode of treatment, but no disposition or habit of the mind can be traced up to this source, the capacity, more than the structure, gives the expression and determines the character: from some cause, probably depending on the nursery, the head is sometimes not uniform on both sides, on one there is a developement of a faculty which is not on the other—but circumstances of this nature have a physical, more than a mental relation, and do not awaken attention by any singularity in the state of the mind.

Another difficulty is in ascertaining whether the brain gives the form to the skull, or whether the reverse be the fact. On the skull being removed,

phrenological eminences can with difficulty be traced ; they sink into the general mass and form an even surface. As this is the fact, it is difficult to imagine the growth of one soft part, which does not by pressure, give a character to the surrounding parts, and thus occasion an artificial developement. As the skull is the more solid body, it has power to determine the form ; but it is probable that this is not in accordance with the principles of phrenology, and therefore will not be adopted.

The other view is certainly not free from difficulties. It may be argued, on this point, that as the organs of sense are derived from specific portions of the brain, such as the optic nerve for instance, which has its express position, and so of the other nerves of sense, it is probable that an excited use of any of the senses enlarges its origin, if so, the propensities, which have their residence in the brain, may also influence the size of their respective organs ; so that the fact which phrenologists have to determine is, whether an increased action of any of the senses, or any of the dispositions of the mind, influence the size or quality of any portion of the brain. When this is ascertained, the cause of the form of the head will receive considerable light, and the study of phrenology assume an interesting and important character ; but, if in the investigation it be found, that the form of the head is in a great measure congenital, or if the organs spontaneously develope, then the mind will depend on the organ, not the form of the organ on the energy of the mind. But too little on this subject has been ascertained to require more express attention.

Another difficulty in the way of establishing as a principle in nature, that power of mind which becomes hereditary in its strength, is the temperaments. In the same family there may be the slow, lethargic, melancholy individual, and he who is volatile, impetuous, and sanguine ; the temperaments of both give a colouring to their minds which makes them, in character, antipodes to each other. The one casts a gloom over scenes of pleasure, the other defies disaster, but, in judgment, they may be equal. The temperaments are more indicative of a physical than a mental difference—education is competent to correct much of their evil, and place the individuals on an equal rank in society. Thus the temperaments do not furnish an argument against the mind descending in unbroken strength from parent to child.

We now arrive at our subject, which is to shew the permanency of the mental character—that under the most adverse circumstances, even when uneducated and unemployed, the mind loses nothing of its intrinsic worth, or its original vigor. It has, in another place been stated, that it acquires strength, in proportion as it comprehends first principles, and when in this way strengthened and enlarged, it is essentially so and for ever, other generations may tarnish its beauty, but can never destroy its power—it has risen never to fall—it may be stationary but cannot retrograde. Capacity is mental power, and what can approach that power to take from it and make it less ? Its operations may be retarded, but who can rive it asunder and separate that which has been acquired from that which is original ? Can years destroy it ?

Mind has no measure of time, and is not subject to its power. Neither destroys it. Can it destroy itself? Not till then will it destroy the mind. Mind is a whole and identifies itself, its existence is under the safeguard of its Maker, who has pledged its eternal duration. Will its image be unlike itself? will it forget what its progenitors established? Forgetfulness is a physical, not a mental defect. Organization has need of memory, it may forget, for its safety is in experience, and when the senses become obtuse, the mind is less accessible and less expressive; experience may fail from the memory and be lost, but the capacity is permanent, it does not even require the aid of memory. Facts, on being presented, are judged—the tribunal is not memory but mind, not experience but principles.

The object of our inquiry is not whether a difference of capacity exists, but whence has it originated? Is it from the mind not being essentially the same in every individual? or that there is more than one principle, more than one faculty, that we call mind? Is it a genus, with its species, dividing the family of man, and branching it out not by circumstances, but by orders of intelligencies distinct from each other? It is not thus. Man is one family, and the condition of all its members is, at birth, the same—absolute ignorance characterises the whole. Knowledge does not descend, it is not imparted to the child, but a capacity is given; which is not in all alike, each has a limit which it cannot pass. One youth makes a steady progress in Mathematics, up to a certain point;

another advances onward ; but a third finds it difficult to comprehend its rudimental principles. Setting aside physical causes of difference, there is in these youths an obvious inherent capacity. Whence has this arisen? why has the mental strength of one, exceeded that of another? The fact itself leads to the cause—thought is the source of all mental increase. One family rises in civilization above another, because it has thought more, and by this the distinction is created. When life commences the mind exists, but at this period all the race are equal ; education developes the true elevation of the mind, and assigns to each individual a standard to attain, a point to reach, which refers not to age or circumstances, but to family reputation : is this accidental? or is the measure of the capacity of the parents that of their children? Certainly it is so. Society expects more from an educated European than from an educated Indian ; in rudimental knowledge they may be equal, if their memories are so, but they do not draw the same conclusions from the same premises—their judgment is not equal. That which is true of individuals is true of nations—equal advantages do not produce equal results—the schoolmaster is not always alike successful.

This well-known fact admits of no other solution than that of the capacity being hereditary—the children of a civilized nation, under similar instruction, being capable of a greater strength of thought, and more profound research, than the children of a rude, uncultivated people. The influence of physical causes

differs greatly, and is readily distinguished from that of mental. The children of a philosopher may be idiots, but the family, to its remotest generation, is apart from a family that had never been educated, the style and character of thinking and acting is unlike.

But individuals or families need not be selected, as examples furnished by nations are more complete and less exceptionable. The Moravians, more than half a century ago, took the Esquimeaux under their paternal care, and by every means in their power increased their physical condition, and their mental growth; but the sterility of their country destroys every motive to exertion, nothing urges on mental improvement, (for what have they to obtain but a property in snow-cabins, or in the sea-birds of the ocean?) their hereditary character is most pertinacious, because the country shuts out improvement, by denying reward. Some advances have indeed been made towards civilization, a little more will compel a change of residence, for mental improvement demands an increase of personal comfort, these accompany each other, and if denied, produce a restlessness which demands relief: the Esquimeaux have learned from the missionaries the greater salubrity and comfort of other climates, which may make them less unwilling to leave their own, their continuance can only be referred to an hereditary adaptation in mind and body to the place of their ancestors. Children of the natives, brought up in the same dwelling with those of the missionaries, enjoying the same circumstances, and walking the same outline of life, have the same capacity, the same disposition and bent of mind their pro-

genitors possessed ; the pertinacity with which they retain their hereditary character, under circumstances so calculated to induce a change as that of the residence of Europeans among them, is an evidence that their climate is a blight to their faculties—the tendencies of the place seem to counteract the effects of instruction, and to give to the scene of their pleasures the dreariness of death.

The little resemblance there is in this people to the rest of their race, is a striking illustration of the power of the mind to retain, and thus substantiate the principle of the descent of mind, and perpetuate the character that circumstances had formed unchanged in its influence. Contrasted with this part of the family of man are the people of our own vicinity, or, to make the illustration more palpable, we refer to ourselves, and by tracing back the history of our families, the same outline is seen ; and the same progression of intellect advancing onward, and still to be increased, is felt. About seventy years since the labourers of Lancashire received sixpence a-day, and were fed ; they were then an unassuming, ignorant, obedient people, who seem not to have added to their stock of ideas or personal comfort of many generations, oat and barley bread constituted the chief means of their subsistence ; but the discoveries in chemistry soon after that period, gave an impulse to the labour of the country, and the services of these people were solicited, and a new era commenced, in which their habits were broken, and their hereditary dispositions counteracted, new ideas led to new principles of action, and while all advanced in comfort, many advanced to wealth ; those

on whom their parents had exercised their natural authority, and had trained up in obedience, were qualified to fill the station in which prosperity had placed them—a mind prepared waits but the opportunity to advance, the preparation rests with the parents. Sunday Schools have now opened the eyes of the mass of the people, they also have gained in mental strength, which will not be lost, even now it has become, in part, hereditary ; the men of this generation fill stations which their progenitors could not have engaged, that which some years since was only perceived by a few, is now comprehended by many—a step has been taken which none can retrace—practical men begin to understand the principles of their art, and it must advance their general character and improve their practical skill. Intellectual strength requires appropriate accommodation ; he that prefers the shadow of a tree, as his place of repose, to the safeguard of a bed, has never thought. Mind fixes its own way-mark in the accommodation it provides, and leaves no way back to barbarism, the original position cannot be resumed—mind is hereditary—by cultivation it acquires a power over the body, which it refines in its propensities, and makes more correct in its symmetry ; those towering minds, that now and then arise to bless the earth, and shed new light around the horizon they enlarge, so far subdue the physical portion of their system, that, in a few generations, their family becomes extinct, such is the extent of influence the mind has over the body : no respite from mental labour, or change of country, or

change of circumstance restores the balance of influence—the mind has subdued the body, and it withers:—the Herald Office records the fate of genius, for where is the name that two centuries ago held a distinguished place in the senate or in literature. The warrior may live long in his posterity, but he that thinks and feels cannot—a mind pushed on beyond the age in which it lives, a mind that creates mind, overpowers the body. Where are the sixth generation of the man to whom the world is indebted? Not even a patriot, who has stood forth for his country's good, can anticipate a late posterity, he lives but in the hearts of his countrymen—a long line of ancestry is not a gem in a coronet.

It is objected that intellectual parents are seldom equalled by their children. Granted—an eminence one gained leads to a descent. The combination of circumstances which produce that physical condition, which admits of the highest exercise of a cultivated mind, is of rare occurrence, and cannot be repeated; a vigor of body is requisite in the ascent, which is not afterwards found in the family. A nervous sensibility is the result of an over-excited mind, a second great character cannot arise without a renovated body, greatness is attained, before the mind has so subdued the physical system that enthusiasm is checked by corporeal feebleness, and the power of the mind limited and restrained: add to the physical powers that which they have lost, and the mind is prepared to advance, but a body, once over-excited, has begun the process of extinction.

All organized matter is improved by cultivation, and has a point of excellence to which it can be carried; the weed, by cultivation becomes a flower, and the crab rises to the flavour of the pine-apple, but the point of excellence once gained resists further improvement; if the flower changes its colour it loses in fragrance, if the apple gains in size it loses in flavour—organization can be pushed forward only to a given point, it there continues for a short season and then declines, and at length is lost—some varieties of flowers and fruits, which gratify the present generation, will not exist in another. The cultivated properties of animals are only maintained by the great care of the breeder, the speed of the horse, and the scent of the dog would speedily be lost, without the constitution be renewed by an admixture of blood; and can it be thought strange if the physical constitution of man be, in like manner subject to the laws of matter? cultivation refines the body to a certain point in harmony with the mind; if it advances one step onward, and the body cannot sustain the excitement, is the mind material? The rude, unfeeling, thoughtless boor, by a long process of cultivation, becomes the philosopher and the philanthropist, and then the power of the mind so acts upon the body, so raises its excitability that its mental energy destroys its physical strength, and the boor gives place to a refined and well-ordered mind. Character to become hereditary is the consummation of the care of the parents, and the discipline of the schoolmaster, it is not the production of a generation, but civilization is measured by its advance—the progress of one, keeps pace with

the other. Rome rose in not less than seven centuries to the zenith of her greatness, Rome required a longer period, and modern Europe is still but rising to the place they occupied. The meanest civilized nation of antiquity left monuments of an expanded and patriotic mind, greater than those modern Europe can display; emulation has never swelled the hearts of her people, as it did their's, and now the love of fame has ceased but from the warrior's breast, because he alone receives the nation's honor. Literary and civil merit are without reward, and the desire of it has vanished with the expectation—he is an enthusiast who strives to benefit his race.

The feudal system has been the tomb of national greatness, by checking national emulation, but if modern, still looks to ancient Europe for instruction, she will not long do so; her national, her hereditary character is rising, knowledge is being rapidly diffused, but character does not become hereditary, till the mind has refined the body and they co-operate—the body yields up its grossness, before it becomes the medium of a refined and chastened mind. This relation, which is the basis of the hereditary character, must be formed—it is forming—subjects are now understood which other generations could in no way comprehend. Education had then not been wholly neglected, but it was so sparingly diffused that a nation's advance in civilization has been extremely slow, only after the lapse of many years it is discernable, and we hail its advance, slow and tardy as it has been, as an evidence of the permanent improvement of the strength of the mind. The system of

education has continued the same during several generations, the occupations of the people are, in many places, the same, nothing has changed but themselves; they judge differently, and are an evidence of the force of the accumulated influence of continued mental cultivation—the people are not now what they once were, an hereditary change is going on, or the education of the first generation, being the same as the present, would be as complete and efficient, and the capacities of the men of that day would be as great, and their knowledge as extensive, as those of the present.

The change effected admits of no other solution than that the people have advanced in intellect. Were not the progress of the mind subject to some fixed principle, it would not be permanent, but it is agreeable to its constitution to advance, it is also in its nature to retain its acquisitions; the ground it has gained, must, before it again advances to greater strength, be made sure, and this can only be accomplished, by its strength being made hereditary; so that the children advance from the point their parents had attained. Were it not thus, one generation would be sufficient for the civilization of a country, and New Zealand might, at once, rank with European nations—its immediate education being all that is necessary. But the mind does not so advance—a knowledge of facts may be gained, but these are not strength of mind. Were the children separated from the parents, and to enjoy all the advantages of Europeans, their civilization would be facilitated but not accomplished; often the experiment has been made with children of

various tribes, but it has failed ; even the domestic servants of an educated family, after a residence of many years, leave with the same cast and strength of mind with which they entered—they have acted from habit, and have not exercised their understanding so as to promote its growth. .

That civilization is the work of time, and only accomplished by a slow and progressive growth, is read in the history of every country, and its being hereditary is confirmed by the fact, of a capacity once acquired never being lost to the family ; neither ignorance nor oppression influences, so as to injure its strength, mind has made its acquirements part of itself, and its strength continues, though concealed, till more favourable circumstances call it forth—that which it acquires it never loses. China and Hindostan nursed the sciences, while as nations they rose in power, but injurious institutions destroyed their energies, and improvement has ceased ; yet their minds have not receded, their countenances, though destitute of energy, are not of intellect—better institutions would evidently revive the character of former days, and place them with Europeans in the scale of nations. The Portuguese and Spaniards, who first visited those regions, describe the Chinese sailors as far surpassing the Europeans in knowledge, and to be, by their attainments, even qualified for priests. The genius of those days has not fled, the people give sufficient evidence of their capacity, and that their children would not be inferior in an English school, although they must enter it with faculties long-neglected and waste, having slumbered from generation to generation, without

a thought being indulged that might kindle the desire of improvement. The Ethiopians, the Carthageneans, and the Arabians were once emulous of national distinction, but misrule has extinguished their exertions, and rooted up their character, and they rank with the uncivilized ; but is the country of Hannibal, or of Avicenes less in capacity, though less in literature ? their energy of the people is an evidence of their intellect—in compared with the serfs of Russia their higher intellect is unequivocally manifest. The modern Persians, though unlike the men Darius governed, are still more unlike the descendants of the Goths and Vandals, that border on them. They still are Persians.

The Turkish empire is another evidence of the stability of intellect. Nations renowned in history, are provinces of this vast empire ; all that despotism can accomplish has been done, and yet the people maintain their elevation, the long absence of the school-master occasions ignorance, but not inability—in strength of intellect they bear the rank they once attained. What nation in Europe, looks on the people of any province of the Turkish empire as inferior to themselves in mental strength : one province, forming, till of late, a part of this vast empire, had fallen low, pressed down by the iron-hand of its tyranny, but has again immortalized its name at another Thermopylæ, and now she waits the school-master, not to form, but to exercise her genius. After twelve hundred years of thralldom, the fire of former days has burst forth in Greece, and still burns, and the people rise from the pressure of despotism with

undiminished capacities, and soon it will again be an honor to be a Greek.

Was instruction alone necessary to advance a nation in civilization, the Aborigenes of America might at once become philosophers, for many of them have received liberal educations, but their hereditary capacity forbids the honor. A gentleman, of whose veracity there can be no doubt, lately informed me of four Aborigenes, who had spent many years in the States, several of which were passed at College, where their attainments were so considerable, as to qualify them to deliver lectures on subjects connected with Theology with great credit to themselves, so that their return to their tribe was contemplated with much interest, as promising to improve its condition and its habits; but, within a fortnight after their return, they conformed to the customs of their nation, and exchanged the refinements of civilized life for the bow and arrow—their hereditary capacity governed them. Could the cultivation of memory, or any physical capacity, supersede the force of an hereditary bias, a Calmuc Tartar might become a courtier. The Italian, Portuguese, and Spanish peasant is as uneducated as a Hottentot, but, taught at the same school, their hereditary capacities would discover their extraction.

In whatever light the subject is viewed, the same fact presents itself,—the mind is one, nothing can change its nature or diminish its power. The body may seem to triumph over it, but it is by its passions which afford no triumph. From behind the darkest, and most adverse circumstances the mind re-appears,

unshorn of its strength, unfaded in its beauty, bearing the stamp of immortality in its hereditary strength—a strength which cannot be broken. The savage mind can sink no lower, nor rise without express attention, but when risen it cannot recede. History is without an example of a nation being a second time, hunters or shepherds. Nations have been exterminated, as the Egyptians, but none have lost the capacity of their forefathers; they may become more vile, but not less in the power of thought. The philosopher, who can rise no higher because his body bars his progress, leaves to his posterity his capacity—mind knows no power by which it advances but mind.

OF EARLY IMPRESSIONS.

Besides the influence of sympathy over the infant mind, giving a bias to the dispositions and passions, and besides the weight and force of hereditary propensities and bearings of the mind, there are casual influences, and those which arise from the circumstances, and depend on the situation in which a child is placed, which determines its habits, its associations, the mode and style of its living, and whatever relates to the economy of life. Impressions such as these determine the character as it stands in society—it forms the peasant, and marks out the line of every grade of society. Early impressions are those by which instinct is best taught, and by which reason, in its rudimental form, is best elicited, after the mother's influence has been bestowed. The different influences here pointed out are each important, and in forming a character neither can be overlooked. That which is now especially before us, relates to the first apprehension a child has of the objects that surround it, and of the circumstances which especially relate to itself—they are a child's first apprehensions and actings.—An essay on this subject was published in the *Monthly Magazine*, for April and May, 1835, and will be made the basis of the present chapter.

We commence with the first impressions of the most abject of our race, with those who are beyond the record of the historian, and apart from the origin of nations, who have lived a life of solitude—men dwelling in the forest, and contending with the beasts for the means of subsistence—Peter the Wild Boy, the Savage of Avignon, that also of the Pyrennees, those of the Dismal Swamp in Virginia, and others of this description. That such have existed is beyond controversy, the circumstances of their capture, and their subsequent history is faithfully recorded, and their sad narration forces on the mind the unwelcome truth,—that those individuals who grow up to manhood, without intercourse with their species, are without reason—are idiots—not in the common acceptance of the term, not from a deprivation of the faculty, but from a want of its developement—all they know is from the influence of their first impressions, and from instinct. These forlorn beings knew no instructor ; they never heard the human voice, rousing from its dormancy the reasoning faculty, they never saw their species, and therefore imitation, which so much assists others, has been denied to them ; beasts were their associates, and they received from them their first impressions, and were like them in disposition and habit : no frown chide their misconduct, no smile awoke their sympathy. Thus destitute, man is lost to his species and to himself—his first impressions ranked him with animals, and after circumstances cannot restore his rank. Peter was not more than twelve or thirteen years of age when captured, but the darkness that enveloped his understanding

could not be broken through—his mind was a chaos, which defied the skill of the master. Though much caressed, he preferred the loneliness of the forest; though generously subsisted, he preferred the spontaneous productions of nature: his associates were beasts, they gave and confirmed his first impressions, and he sunk almost to their level—his body grew, but his mind was that of infancy.

By this unexpected fact, it appears that the reasoning faculty is excited, and dawns in the cradle, or is eclipsed for ever. Peter could not learn, the first impressions made on his mind fixed his character beyond the power of education to controul. Dr. Arbuthnot, under whose care Peter was placed by George the First, abandoned his charge from inability to teach the boy to speak. He was then placed with a farmer, who succeeded in teaching him to hum a few tunes; but although he lived to be an old man, he was never a voluntary inmate. The house was to him a prison, the wood his home, to which he escaped at every opportunity, and returned to the habits his first impressions gave, living on the bark of trees. Peter had not the appearance of an idiot, and the method which marked his conduct proved that he was not one—he was the creature of first impressions. Other individuals bred like him, in solitude, with some shades of difference, evince the same inaptitude to receive instruction. The mountain or the forest had been the scene of their first impressions—here they obtained a determination of character, which no subsequent influence could counteract. By what mysterious circumstance these children lived apart

from society it is difficult to conjecture. If abandoned by their parents, children of three years old would never forget the first impressions the habits of the species had made upon them; at an earlier age it is not easy to discover by what means they subsisted. An animal bereft of its young, will take those of other animals to its lair and nurture them; abandoned children may have been so preserved. But this is a speculation foreign to our purpose, the consequence of solitude, rather than its circumstances, are the immediate object of attention. We therefore pass to another fact. Children who are born without the organs of speech and hearing, are, in a great measure, cut off from society; the organs of sight and of touch make them acquainted with many of the sensible properties of matter, and if there be a great aptitude for imitation their reason is excited, but, if not, idiocy follows—for no attention, paid after the years of childhood, is influential. If the reasoning faculty be not early in operation, it never is. The proportionate number of deaf and dumb children, who are idiots, is greater than of children whose senses are perfect, not probably because more are born in that state, for their countenances do not indicate this, but because a solicitous attention has not been paid to awaken the reasoning faculties through the organ of sight, and thus, by making early impressions, maintain the rationality of the child: for absolute ignorance is idiocy, which must follow if no impression be made.

But if reason did not direct Peter, and other men of the woods, how did they obtain the means of subsistence? They were guided by instinct. This

principle at least was perfect in them ; but it is not so in the idiot by nature, consequently their want of rationality arises from its not having been excited in infancy.

Passing by our forsaken fellow-creatures, the residents of the forest, who cling to their first and instinctive impressions, derived from animals, with a pertinacity which bears down the springs of intellect, and excludes them from the sympathies and associations of their species, we pass on to man in his rudest associated state, to the tribes and families of hunters, to whom reason, at its dawn, has shewn something of their dignity, by putting the beasts of the forest into their power. A suspicion of idiocy rests on the unhappy individuals just noticed, but not on the tribes ; their rationality is unquestionable—reason has not yet sufficient power to form their character—they are the creatures of early impressions and of instinct, aided, in a small degree, by reason. No tribe of hunters have, by their own desire, become civilized, or made any efforts towards that state ; their early impressions form their entire character, they have no desires beyond the chase, and these they had in childhood—to overtures made to American tribes their answer has been, “We will attend to you when buffaloes are scarce.”

Why do these people refuse civilization ? It may be answered, that they have not the care, if they have not the comforts, that reason generates ; their habits are those of nature, and they prefer them : it is their choice. After comparing the two states, they prefer that of nature. We are aware of the wisdom which

is attributed to these tribes, but it is not wisdom, but a blind pertinacious adherence to first impressions. They reject instruction, because an influence has the ascendancy which reason cannot subdue—not that a hunter is incapable of tuition, but he will not make instruction the rule of his conduct, he will be no other than his father was. Mr. Kolben relates that one of the Dutch Governors of the Cape of Good Hope brought up a Hottentot in European customs, and gave him a liberal education, and when grown up, obtained him an office under the Governor of Batavia. On the death of the governor he returned to the Cape, and having paid a visit to his countrymen, laid his clothes at the governor's feet, and begged that he might live and die in the customs and religion of his ancestors. The English East India Company educated two young Hottentots with no better success. Caffres, New Zealanders, and North American Indians have, in many instances, been treated with the utmost kindness and the utmost care, but no one has been civilized, or voluntarily wore a garment, or in any respect, when returned to their tribe, diverted from any of its customs—education effected no change, their first impressions formed their character.

On what other principle can these facts be accounted for than on the one stated, that early impressions constitute the entire character of persons in this stage of civilization, so far at least as relates to the transactions and concerns of life ; reason falls to the ground, where there are no wants or desires it can supply. The mind must be prepared before it can receive instruction, for if mere impressions, mere instinct have

the ascendancy in youth, it is not overcome in the man—such a character is unalterable. The history of every hunting tribe bears this fact fully out. They are indeed far advanced above the individuals who have lived in solitude, but they are not governed, or even influenced by argument; reason has no force, compared with their impressions, or the youths, so long resident in Europe, would have had something to communicate to their countrymen. Early impressions made them hunters, and when once more they found themselves in the midst of their native forests, their early impressions flowed back upon them with all the freshness of former days, and they felt and acted as those who had seen no other customs, or felt no other pleasures. The first impression made on Caspar Hauser's mind was by a little wooden horse, his play-thing—this formed his character, he attained excellence in horsemanship, but in no other way.

Such facts of the power of early impressions show their importance, and are conclusive as to their consequences. If neither instruction, nor example breaks through the early impressions of a barbarous people, by what means has it been accomplished? The answer is obvious. By an increase of their wants to which, early impressions yield of necessity; an increase of population is the ordinary means, but others might be devised. Mexico and Peru had passed beyond the shepherd state, and were advancing in civilization, their wants surpassing the supplies they could command; but at this juncture the Incas appeared, and taught the useful arts, their persons were, in consequence, held sacred. Similar benefits have often been

offered to the North American tribes, and rejected—want not having roused their faculties, instruction had no influence. Nearly three hundred years have been passed in the face of Europeans without any acquisition being made—early impressions form the man, want was unknown, thought is unnecessary. Turn over page after page of history, and point to the nation who have broken the fetters which their first impressions, their first acquaintance with the concerns of life gave them, without having felt the pressure of want. The nations that overcame the Roman Empire afford an additional illustration of the subject before us. They had drunk in with her milk their mother's mental energy, and received the hereditary propensities and capacity of their family; but their express and particular pursuits, their likes and dislikes, their social character was the consequence of their early impressions. They not only had flocks at the time of the irruption, but they also practised a rude and imperfect husbandry, but labour was irksome, its necessity had not been inculcated in childhood, and now it could not be made pleasant. Before them lay the rich provinces of the Roman Empire, they viewed their abundance, and trusted that by conquest they might possess themselves of their wealth, and be relieved from the toils of agriculture; they succeeded in their desires, and trampled under their feet all that was elegant and refined—they were too low in capacity to comprehend their worth. Some tribes that embarked in this enterprise lived almost under the walls of the Capital, and were familiar with the customs of the Romans. They had

seen the productions of their industry, and had witnessed the endearments and blandishments of their state of society ; but all they saw was foreign to their feelings and their wishes, and therefore excited no interest. Rome had sent ambassadors to them, but they saw in them nothing to admire, and never adopted a single Roman custom.

Had these Vandals been open to other impressions, had an increase of knowledge overcome their earliest associations, or in any way had they been susceptible of influential impressions after those of childhood, they must have civilized ; every thing around them was calculated to give instruction, or to excite admiration, but they did not feel a want which industry could relieve : their first impressions were those of a banditti, and the circumstances of that period fostered them. Had they even, in a small degree, wished to imitate what they had seen, one person would have attempted some useful or ornament art, a second would have been charmed with another, ideas would have been exchanged, and the mind strengthened by the collision of thoughts. By this direction of the judgment no two persons see objects in the same light, who see so as to be interested with them ; but the mind of the Vandal was sealed, no thought could enter and be made his own, the impressions of childhood rested with him and formed the character of the man, blind, headlong, and morose—reason had no power.

Contrasted with the indifference and obstinacy of the Vandals, are the anxious gaze, and enraptured exclamations, of the most uncivilized part of a civilized

country, on paying a visit to a city. A few only, will be so much the slaves of their first impressions as to return to their hamlet, without having seen something to admire ; while others, charmed with every thing they saw, would desire to remain. Had only a few Vandals felt thus, Rome had not been conquered.

Whence this difference of effect in persons equally unlettered ? The Vandals had enjoyed greater advantages than the peasant, but their minds had not been equally circumstanced. The peasant prefers a humble cottage, to a splendid mansion as his residence, but a Vandal rejects the bed ; the peasant quits by degrees, his station in society, and ascends in social habits : the Vandal pertinaciously adheres to customs, which place him in the comforts and accommodations of life, only one degree above the brute. The source of this great difference in the two characters, is in their first impressions, in that bent and turn of mind, which their parents imposed in their infancy. The difference between the child and the man is, in neither case, very great ; they both know at six years old, all they know at forty, the growth of the body has only enabled them to practise what they know, and to pursue what they desire.

But we quit the hunter and the shepherd, with minds incapable of emulation, and advance another step in the progress of civilization. Here Russia, Madagascar, and part of Africa present themselves. In these countries civilization is sufficiently known to be desired, and their first impressions are more varied and expanded, and more directed to personal exertion and selfish feelings, consequently the

mind is more at liberty, and not bound down to barbarism, and as the child grows up, he is enamoured of the civilization he does not possess, and therefore is open to instruction—it is not the age of reason, but of that in which merit is more respected than in any other. The King of Madagascar sent several youths of the first families of his kingdom, to this country for education. Three of them were placed under the care of my friend, Dr. Clunie. They acquired a knowledge of our language, and imitated our manners; in school talents they equalled the European children of the same age, but their first impressions were received in Madagascar, and though they were not more than nine years old when they arrived in England, they did not, after a residence of five years, lose their national character: and national character depends on early impression, not on capacity, not on hereditary bias, but on the impressions of the early circumstances of their lives. They took their station among their school-fellows, who treated them with distinguished attention and much affection, yet there was a want of assimilation, they and their school-fellows were evidently of two countries, and have been brought up under different impressions; but their country has broken the fetters of instinct, and, as generations succeed each other, their early impressions will be changed, and they will present themselves to the world in all the diversified characters and capacities of their race.

It may here again be remarked, that the distinction between maternal influence, hereditary character, and early impression should ever be borne in mind.

The first, relates to mental and instinctive influence, the second, to physical and mental bias derived from the parents, the last, to the influence of circumstances and the bringing up, both of a physical and a moral nature. At an early age, commonly from ten to fourteen, children leave their parental roof to become domestic servants in families, whose style of living differs from what they had been accustomed to; at that age the mind being open to instruction, it is supposed that the character only then begins to form. The circumstances of these young people, contribute indeed to their comfort and tend to wean them from the love of home; they are better fed, better lodged and clothed, their treatment is that of kindness, and their situation gives them an education calculated to elevate their minds, if elevation were possible; but having lived several years thus circumstanced, they marry, and return to the cottage life without repining at the change, or attempting to alter any of its circumstances; nothing is embellished by them, nothing imitated, they do not carry in their minds, or in their wishes, the accommodations they have left, but they look back to childhood, and its impressions become the standard of their present pursuits. Their manners were assumed to suit their circumstances, but not assimilating with their first impressions are willingly abandoned, and the comforts of affluence exchanged for that which appears like penury, but to them is happiness.

Another class of servant is obtained from families who have seen better days, and who have received some education, and have had some standing in

society. Suppose them to succeed the former, and, like them, to marry cottagers, from the day of their entering their new residence, a different influence of early impressions will be manifested ; the order and style of their furniture will bespeak the state of their minds, those who, in better days, acknowledged them 'as their equals, find them so still, they retain the same method, the same taste, the same expression of character, the same views of propriety, the same sense of honor—they have lost nothing by servitude, whilst their predecessors have gained nothing—both return, when they become independent of restraint, and with delight act on their first principles.

Should these facts appear to be taken from too low a class of society, we appeal to the citizens of Greece and Rome, and ask by what means they attained their eminence ? An intellectual religion did not enlarge their minds, or its morality chasten them ; their facilities of education were small, compared with those now enjoyed, they surpassed us in nothing, but in guiding the first movement of the mind, and in implanting in it a thirst for honourable distinction, which grew with their growth. We depend on the school to overcome the neglect of childhood, but the hour is then passed in which the character of decided greatness can be formed. We repeat the question, what gave the Ancients their decision of character ? It was not their religion, for it was without precept. It was not ambition, or envy, or imitation, for they were without a rival, all around them were barbarous. It was not a general knowledge of the arts and of letters, for they, in a great measure, created them.

It was not their laws, for they did not understand the principles of legislation, but they knew the force of early impressions; the father of Hannibal knew it, and every nation since has known it. The contempt that one nation bears to another is the fruit of early impressions—the impressions of the nursery. Rome owed her greatness to her matrons, they formed, and gave energy to the minds of their children, whose first impressions they imparted, and the children grow up in the likeness of their parents, as an acorn unfolded becomes an oak.

Early impressions, more than any other source of character, distinguish family from family, and nation from nation, and may be distinguished from hereditary propensities. A domestic hen has an hereditary tameness, it has also a character derived from circumstances; a kitten, bred in a barn, is not wild, but its tameness is very unlike that of a kitten, of the same litter, made the play-thing of children. The shyness of the one, and the docility of the other, are the effects of early impressions, but the disposition to domestication is in both hereditary; reverse their bringing up, and the kitten, which is now without spirit, would be shy and fierce, while the other would be docile.

There are also illustrations of the same combinations of influences in the history of our race. The Jesuits formed the inhabitants of Paraguay into regular settlements, children were born and educated in them, and the whole establishment obtained from Voltaire, the character of being; highly moral, amiable, and unoffending; but, on the Jesuits being driven

away, the settlements were broken up, and the people divided into tribes of the same character, as those in which the Jesuits found them, and the habits and avocations taught by the Jesuits were soon forgotten ; inclination did not favor their formation, consequently, the early impressions of their children were not in harmony with the establishment, the parents did not teach, what they did not themselves approve, nor would their children readily embrace that, which their parents did not recommend. These early impressions aided their hereditary dispositions, and they willingly resumed the habits of the tribe, nothing besides had been imparted, time did not permit the Jesuits to supercede the hereditary dispositions by a change of their early impressions ; could the children have been impressed with a love for the habits of a civilized family they would have retained them, but though brought up in a house, other impressions were given ; they were not civilized, and therefore rejected its institutions—the mind cannot act above itself, as the bow is bent so it grows.

OF THE INFLUENCE OF THE BODY IN REGARD TO EDUCATION.

The relation of the body to the mind, its influence over it, whilst itself is subject to controul, gives to Education the highest possible interest, and constitutes it the primary object of parental attention. The body is the seat of knowledge, the instrument of power, the source of the passions, and merits more consideration than, in modern ages, it has received. Lycurgus knew its value, and so did the founders of the Roman Empire, but, in the present age, if it be not absolutely overlooked, it is under-valued. Who among us, has apprehended the subject of education in this department of it? and yet all admit, that by the faculties and general influence of the body the mind is exalted or degraded, that the passions, as they act upon the mind, are vices or virtues, and that the will, as it is disciplined or not, is obedient or perverse. That which is the source of the mind's power, is the former of its character, and the director of its habits: in a few generations that which, at its commencement, was the creature of circumstances, becomes a constitutional propensity and controuls the mind, and writes its own image upon it, and points to the physical capacity as the subject of educational care—that which forms the habit forms the man.

The mind is so feeble and so enslaved, so destitute of native strength and energy, that it would ever remain the dwelling-place of ignorance and imbecility, did it receive no succour from without itself, and its only succour is education, and the only channel through which it can pass to the mind is the body—an agent thus influential, demands the refinement it is qualified to receive, The mind cannot cultivate itself, it requires the aid of the body, its energy and strength are bound by its ignorance, which must be removed.

But this agent is unfit for its office, the body is not a pure medium, and the assistance the mind receives through it, partakes of its character. A body, for instance, given up to intemperance, or enslaved by any passion, communicates a savour of the prevailing appetite, and thus poisons while it professes to feed. The same event does not convey to the civilised man, and the savage, one impression, nor does it strengthen the same disposition of the mind. A cultivated mind, contemplating an enemy writhing in the agonies of inflicted torture, feels indignation and horror, but the savage that inflicts the misery is delighted—thus the same fact, moves different passions, according to the cultivation the individual has received. Every cultivated passion, strengthens the body for its repetition, and, while it seeks to obtain the co-operation of the mind, a habit of vice, or of virtue, effect a physical tendency towards its continuance; the propensity grows with the practice until it becomes constitutional, and increases the physical bias towards that particular passion. The drunkard, at the outset, did not anticipate

that character; he drank to excess from the example of others, but presently the pleasure increases, and he drinks for its own sake, and becomes himself an example of intemperance—now it is necessary to his comfort, and is interwoven with his natural wants. The miser saves money first, it may be from a sense of duty, then from the love of the object; as years advance, this eats up every affection, and the comforts of life are abandoned at its bidding—the feelings which once opposed its influence are now dead, and it reigns alone. The love of money presently gives way to the fear of poverty, and the wretched being who is its subject, exhibits the strongest evidence of the power of the body to destroy the mind; the victim cannot dismiss the disposition, it has eaten up affection even for himself—he is a slave, and does not enjoy the fruit of his labour. The child of such a man is easily made frugal, and the child of a drunkard should be early cautioned against that vice. A family, or a community, may be so educated, as to become eminent for any virtue, or for any vice. Such is the force of physical influence.

The Greeks were proverbially liars, the Romans were equally distinguished for veracity and honor. The character of a religious sect continues through successive generations, and it is not difficult to discover, in many of their children, a tendency to the disposition which education is about to inculcate. The inability of the unaided mind, to subdue the physical opposition it meets with, in attempting to overcome any propensity, natural or acquired, gives to education an importance of vast import; on its right

administration, the dignity or the disgrace of an individual and of a community depends. In what instance has a barbarous nation sought civilization, or the slave of a passion, liberty from its dominion. Without education, the neglected mind continues to sink in depravity, and to increase in its resistance to mental improvement. An instance will illustrate the truth. At the commencement of the history of man, his animal and mental condition, although very low, is, at the present day, in uneducated nations, still lower : the passions have debased the mind till man, has become a cannibal, lower than this it is scarcely possible to sink. To eat of its own species is revolting to an animal, but the New Zealander enjoys the repast ; the growth of an uncorrected passion is marked by an increase of malignancy, and the deeds it instigates by an increase of cruelty.

Mind is never stationary ; governed by the body, it abets its ferocity and is estranged from virtue, but the mind admits of a cultivation which subdues the body. Men of weak passions, are men of few crimes, and of as few virtues without being stationary ; but the man acute in feeling, and great in thought, rises above his fellows and leads them forward—education, by cultivating the body is the source of his greatness. Mind sheds its influence on mind, through the agency of the body ; not where passion is the guard of ignorance, for there it fails, but where the voice of kindness, is the voice of influence and power. The infant, supported by its mother's arms, is susceptible of this power ; by it the physical domination of the body is combated, and the downward current of the mind is first stayed, and

then reversed : the body, neglected, overwhelms and devastates the mind, but, controuled within its proper limits, it is the instrument of its strength. Matter, in the unchastened direction of its power, seals up the mind, so that thought cannot enter, or sympathy be felt ; its passions and appetites, its senses and faculties, act in a circle, and administer to each other ; but as agents, directed by a rational mind, they administer to its greatness. Matter never establishes a principle of action, and then appeals to its decision : a thousand years roll round, and the uneducated mind still lies concealed in the deepest degradation, a prisoner to the body, from which, it is difficult to extricate it. The first dawn of light, while it faintly glimmers on the path-way of a barbarian, only embitters the few comforts he possesses ; while the New Zealander refused instruction his state grew worse, but now that Europeans reside among them, and have access to their children, their condition begins to improve, the sovereignty of the body diminishes, and the sum of their happiness becomes greater. Matter yields to mind when the contest is judiciously managed, but it never renders a voluntary homage.

It is unnecessary to our inquiry to ascertain whether mind be distinct from matter, and capable of an independent existence, the nature of their increase declares their origin. Matter has a physical growth, the relation of its atoms may be altered by affinity, but its increase is organic ; mind constitutes all spiritual beings, and in this state exists in man, and its increase is from the exercise of its own powers.

In man both these principles exist, they act distinctly but influence each other, and decide his character. Mind is as truly the food of the mind as organic matter is the food of the body, each is sustained by its own nature, mind by mind, and matter by matter; but, as the body is the soil in which the mind grows, it demands the utmost vigilance and skill of the cultivator—as is the soil so is the fruit. Education, the instrument of man's rationality, brings forth the tardy mind, and subdues the physical opponents of its progress; yet the business of the school forms but a small portion of its office, its great and primary object is to rescue the mind from subjection to the passions; this being done, it is an easy task to communicate knowledge, the mind, when opened to receive it, does it gladly. Mental strength is indeed the dignity of man, but the character he bears in society is chiefly derived from his personal habits, habits of a physical nature, which the body imparts; these fix the degree of estimation in which the individual is known to the public, and can it be that this source of character is uncontrollable?—that the feelings of the individual are fortuitous, and his passions their own directors? The very circumstance that character is derived from another source than the mind, is an evidence that education extends beyond it; if circumstances bias the disposition, and if habits are formed by their influence, then, it is the business of education to create circumstances which shall induce habits of practical utility and mental influence.

The physical capacity thus stands high in its influence; but it needs express attention, because it has no

standard of excellence, no fixed point at which to aim, it has no model after which to form the character, for in what is the perfection of the animal character? Is it a model? But although our physical system is but an inferior portion, if its incompleteness be an evidence of its limited duration, yet it is the corner-stone of the man, and of his character—as the body is trained and disciplined, so the mind forms right, or wrong practical conclusions and mental habits; nothing that relates to the formation of its character can be capricious, or the creature of chance, but is founded on principles—there is a cause for an effect—a system must be carried out in practice, to produce a fixed and determined result. Education, as a system, must first be directed to children, adults are not so much its subjects, because the animal capacity is less impressable; a parent may form in his mind the character he desires to see exemplified in his child, and needs not be greatly disappointed—the means in our power are adequate to the end.

This fact is subjected to our constant notice, we see it in the management of animals, which of them cannot be made tame, and obedient, and self-denying?—that which is animal in man, is subject to the same treatment, with an assurance of the same result. It may be remarked, that the discipline applicable to children, is not suitable to animals—it is not the mode, but the principle that is contended for. Discipline is the exercise of power, by which actions are controuled; with children, its demonstration only, if fitly persisted in, is commonly sufficient for the purpose, where reason exists, and even where it does not, discipline is competent

to the creation of physical character. From the half-idiot downwards, the bodily organization is so imperfect as to exclude instruction, and to render discipline without influence, but, from the half-idiot to the man of talent, it creates every variety of character; uncivilized nations exhibit but little diversity of moral or mental strength—the want of education has suppressed their developement—thus the sheet-anchor of a teacher's hope is authority, rightly used. It is not the understanding, it is not the mind, that he can cultivate with moral effect, (taken by itself and apart from its influence over the temper and passions,) for the brain, the seat of knowledge, is not subject to discipline; ignorance, not imperfection, is the evil of the mind, and requires information, not correction—the heart is as much the seat of influence as the head, and has much more power in forming the character.

The Phrenologist has sought in the head, the expressions of the heart, his studies will be improved by a separation of their influences; a cold heart is as difficult to cultivate, as a weak head—its sensibility is more influential on the character than thought—incorrect perceptions, lead to false sentiments and unprincipled conduct. These are wholly physical, for the mind cannot determine its own impressions, they are received through the body, and are independent of the will; impressions, beyond the capacity of the mind to grasp, and associate with some established principle, when acted on, bear the impression of insanity. This subject, however it is viewed, presents the body as the great instrument of character. The dispositions and passions of the heart are not destroyed

by education, but they are harmonised with the mental capacity, and then subjected to its wisdom; that which subdues the appetites and passions, and overcomes the indolence and sloth of the mind, opens a path-way by which, it comes forth to meet the obstacles that impede its progress to the full exercise of its capacity.

That the mind is not the primary object of education its whole economy testifies—a glance will shew the truth of the remark. The mind is the passive recipient of all ideas, every stream, pure and impure, flows into it, but itself is the fountain of truth; incontaminable and perfect truth constitutes mind, it discerns the traces of nature, and the relation of things are within its grasp, in the light the Deity discerns them. Truth is one and the same thing, by whatever being it is seen, but the contemplation of truth does not give to man his character; impressions and habits constitute its leading feature, but this is its thralldom; in its own greatness, it is capable of an elevation superior to the influence of sensation—but, to judge of its capacity, we must first learn its nature. It is endowed with at least so much of one of the attributes of Deity, as to mark its relation. It searcheth the heart, it rejects error in principle, it receives truth, it abhors impurity. Conscience discerns the heart in the light of Omnipotence.

But, notwithstanding its dignity, the mind is degraded and sunk, and shorn of its beauty and its strength, its liberty is taken away so that it cannot act, and it is imprisoned in mortality, the living with the dead, itself thus unapproachable but through disorder,

confusion, and putrescence : and is this the condition of the mind of man ? is it thus degraded, forsaken, and helpless ? Yes, this is its condition ; it waits the aid it cannot itself procure, if released it must be by rescue : but where is the help ? Man can teach his fellow what he knows, but this cannot rescue him, it is at best but a step in the path towards it that he can go. His Creator has promised to break his fetters, in the destruction of his prison-house, and, thus released, what then is mind ? A principle of life, a being active, vigilant, powerful, susceptible of unmixed happiness, and, in its rank and order in creation, perfect. What, when disembodied, it will become may, in a measure, be known by what it now is ; if, through the darkness of its prison-house, it catches a beam of light, it is recognized as its own and identified, and it aids its capacity of happiness and love of truth, but the mind is manacled and bowed down, and rendered inactive, and cannot attain the measure of its happiness : yet it has not lost its inherent, its celestial dignity, if its happiness has faded, its power is still terrific, and guards the wreck of his greatness. Conscience is that power, and it rouses at the approach of any moral form of evil, and wields the only instrument which evinces its divine origin ; with its spear it inflicts a wound which, were its pang to last, would lead on to madness, but when that which can conceal the pang, by its own distempered frenzy, is removed, and the mind again lives in itself, what, then, will be its capacities ? We forbear further to inquire—enough is known. The embodied mind may be lulled to sleep, passion may ask its aid and it is granted, not that the

mind can yield its reason, but it may grant the whole force of the imagination ; passion asks no more, with this it revels and delights itself, and with images of its own creating pollutes the mind. Reason is not deceived, but it forbears to act, imagination has usurped its place, and the mind feeds on its delusions and becomes a party to its crimes, so that where there should be the exercise of reason there is the corrupt dominion of some lust. The mind has been fed with its imagination till it resists truth, so that when the body is removed the lust remains engrafted on it ; freed from the delusions of sense, who dares to encounter his mind.

Here we catch a glance at the object and end of education. It is to weaken the dominion of the body over the mind—information, without moral character, is not education. Let me explain. There is in man a principle of evil, which marshalls under its sway all his powers, with the exception of reason, which offers no voluntary resistance—its prominent defect is its inactivity. Where this principle exists it is not easy to determine—it pollutes the man—the will is its most prominent agent, but the will cannot pervert the reason on subjects that are understood, nor could it pervert any faculty or passion, were it not already prepared by inherent evil. This principle education cannot remove, but it may controul the appetites and passions, and enlighten the mind, so that moral habits, and increased intellectual energy, may be established. Education imparts knowledge, but this is an inferior office, it teaches how to use it, it brings under controul

the whole physical system, it subdues the temper, it corrects the will, it prepares the mind for thought, but it does not change the heart—it still has in it an evil principle, which must be subdued before happiness is known.

OF EDUCATION.

It is probable that no being, endowed with the capacity of thought, enters life so ignorant or helpless as man, or who arrives at maturity so unimproved in character, or so unenlarged in capacity. The ignorance of infancy is seen in manhood when nature is left to herself; like the diamond, the mind receives its value in its polish, but what hand bestows it, or what power renders spontaneous aid? The mind is friendless—of all the works of the Creator, man stands alone dependent on his own energies; but from whence does he derive his motives, and how does he carry them into execution? his mind is blasted, and withered, and helpless, no part of creation needs so much assistance, and none receives so little: affection never beams from the eye, or softens the accents of the voice of him who is without instruction—such individuals are estranged to the sympathies of nature. Is he a husband? the wife of his bosom is not endeared, she is not his equal, and without equality there is no affection—she is his slave, and can neither possess his love, nor yield her own. He is a father, but without a father's heart, his female children he offers for sale, or sometimes takes away the life committed to his trust. Revenge is his darling passion, and by the traditionary

character of some more malicious chief, he models his own.

Man must be educated to be a man, left to nature, he is forsaken, she claims no kindred with him, and sheds upon him no influence. The earth once bestowed on him, has lost the character of a gift, and yields to his necessities only as the price of his toil. We ask not the cause—we ask not why man's capacity is not furnished with the means of its increase? Our inquiries extend no farther, than to the obligations nature has bestowed on man; she has given to him the faculty of reason, shorn of its strength, isolated and forsaken, a waste in creation, this he is to cultivate, but for which no direct and efficient means are provided. Cut off from every source of strength, by the interposition of the passions, it slumbers in its ignorance, no voice is heard, no influence penetrates the barrier that surrounds it, only to impending death the passions yield their power, and suffer the mind to direct relief; but with the disappearance of the calamity, the dominion of the mind ceases, and again it becomes obscure. Imagination cannot trace out a condition more calamitous than man's; cast upon himself, helpless and degraded, with no other light than experience, he begins his course, but experience is not principle, it is not thought, its appeal is to the memory, not to the judgment: thus shut up, and surrounded by a scene of desolation and darkness, he is without energy, without happiness, without hope; he waits till calamity shall disturb the apathy of his mind, and is this man? Is this him, whose gigantic mind, led forth in its strength, scans the heavens, and

claims fellowship with its Maker? Yes, this is man, who, in a state of nature, is so prostrate and fallen, but when educated, claims such high kindred, and has such exalted prospects. Education's aid is essential to his nature, without it he ranges the forest with the beast, in search of their common food, all around is their common property; but, when educated, he, in a great measure, creates the means of his own supply, and asserts his right; for what is education but in the first instance, the removing the obstacles to the exercise of the mind, and then to present proper subjects to its consideration. The mind, so circumstanced, strengthens itself, and claims the beasts of the forest as its property, when made active, it asks no other aid than the senses, the ideas and images they present, are the instruments of its growth.

Here arises a question, where is the seat of man's degradation? Is it in his ignorance? No, it is not there. Infants are necessarily so, ignorance is consequent on their state, it is an evil, but it is not always a crime. Is reason so perverted that it dishonors its possessor? It may dishonor him, but his dishonor rests with himself—he has not cultivated it, or it would have led him on to true greatness. Where, then, is the seat of man's disgrace? In what corner of his system lurks the power that contaminates it? In the physical nature of man the evil dwells. The power that governs the will, brings forth the passions distempered and foul, and they debase the mind. The source of this evil is the first object of educational attention, and necessarily refers to that preparation which the system needs, to fit it for the service

of the mind ; it is in vain first to instruct the mind, and then assign to it the direction of the affections, it cannot govern them.

The education of the nations that shine in history was chiefly physical. The children of Sparta and Persia were placed under the care of the nation, and were brought up with a thirst for distinction worthy of national honor—hence their self-denial, their perseverance, and their emulation. We read in their history the character of their education, it was that of self-controul and obedience, besides which nothing prepares for greatness—a soldier may be great from personal courage, but he only is truly great whose mind controuls his passions. The education of the Romans was not national, but the Roman mothers were fired by a noble patriotism, and educated their children that they might honor their country.—I quote from Dr. Kennett:—

“ *Quintilian* (or *Tacitus*) in the Dialogue *de Oratoribus*, gives an excellent account of the old way of breeding children, and sets it off with great advantage, by comparing it with the modern :—

“ As soon as the child was born, he was not given
 “ in charge to an hired nurse, to live with her in
 “ some pitiful hole that served her for lodgings ; but
 “ was brought up in the lap and bosom of the mother ;
 “ who reckoned it among her chief commendations,
 “ to keep the house, and to attend on the children.
 “ Some ancient matron was pitched on out of the
 “ neighbours, whose life and manners rendered her
 “ worthy of that office, to whose care the children of
 “ every family were committed ; before whom it was

“ reckoned the most heinous thing in the world, to
 “ speak an ill word, or to do an ill action. Nor had
 “ she an eye only on their instruction, and the
 “ business that they were to follow, but with an
 “ equal modesty and gravity, she regulated their
 “ diversions and recreations. Thus Cornelia,
 “ Aurelia, and Attica, mothers to the Gracchi, Julius
 “ Cæsar, and Augustus, are reported to have under-
 “ taken the office of governesses, and to have employed
 “ themselves in the education of noblemen’s children.
 “ The strictness and severity of such an institution
 “ had this very good design,—that the mind being
 “ thus preserved in its primitive innocence and in-
 “ tegrity, and not debauched by ill custom or ill
 “ example, might apply itself with the greatest wil-
 “ liness to liberal arts, and embrace them with all
 “ its powers and faculties: that, whether it was par-
 “ ticularly inclined either to the profession of arms, or
 “ to the understanding of the law, or to the practice
 “ of eloquence; it might make that its only business,
 “ and greedily drink in the whole knowledge of the
 “ favourite study.

“ But now the young infant is given in charge to
 “ some poor Græcian wench, and one or two of the
 “ serving-men, perhaps, are joined in the commission;
 “ generally the meanest and most ill-bred of the whole
 “ pack, and such as are unfit for any serious business.
 “ From the stories and tattle of such fine companions,
 “ the soft and flexible nature must take its first im-
 “ pression and bent. Over the whole family there is
 “ not the least care taken of what is said or done
 “ before the child; while the very parents, instead of

“ inuring their dear little ones to virtue and modesty,
 “ accustom them, on the quite contrary, to licentious-
 “ ness and wantonness, the natural result of which is
 “ a settled impudence, and a contempt of those very
 “ parents, and every body else.”

Roman Antiquities—p. 16, 17.

If, in the best ages of the Roman Empire, the duties of a Mother were so highly appreciated, and her influence so decisive, British Mothers, who have a still higher motive than their nation's honor, in the moral and intellectual character of their children, cannot but feel confident of their own success, by knowing that of the Romans. If a worthless member of the state was disgraceful to Roman Parents, is it less so to British ?

OF THE NURSERY.

The first and most anxious care of a mother is the health of her babe, most sedulously she employs all the means in her power to promote it ; the dress, the food, the air, are revolved in her mind, and adapted, in the best way she is able, to its comfort. I beg here to suggest a few remarks. Formerly, the dress of an infant was cumbersome and oppressive, it is now much simplified, but still it admits of improvement ; many parts are unnecessary, and even injurious, and require an experienced person to adjust them, and, in dressing the infant, so much time is consumed and so much toil occasioned as must greatly exhaust and weary it ; to this it ought not to be subjected, that cannot be proper which distresses the child. A long robe has indeed an elegant appearance, and when the child is borne in the nurse's arms nothing painful meets the eye, but the dress is fastened to the infant, and it sustains the drag and weight of it—were a feeble adult so loaded with clothing it would be found greatly to oppress. Well would it become the judicious mother to simplify still more the garments of her babe, that it may not be subjected to suffering, where an expression of affection was intended—its dress should be light and warm, and so constructed, that the time occupied in dressing may not be greater

than the capacity of the child to bear it. A well-regulated warmth is the first object of a nurse's care, freedom of motion the next ; in regulating the dress these circumstances should be constantly borne in mind, a child, relieved of its dress, shews its enjoyment of liberty, it is therefore desirable this should be attended to in any further change of garments Food is of still greater consequence than dress at the outset of life, of what this should consist there can be no mistake, nature has made a provision which the babe, directed by instinct, gladly receives—nothing can be substituted of like value. When and how often a child should be fed nature directs, its wail creates in the mother a store of its means of subsistence, and thus the want and the supply correspond; to stint a child in quantity is not wise, for it is not dictated by nature—a young animal, curtailed of its food, commonly dies, or, if it exists, the symmetry of its form is destroyed. A child, that has taken too much food, rejects it and no evil ensues, but for a scanty impoverished diet no means are provided to ward off the evil. A child, meanly sustained, loses its vivacity and becomes heavy, and grows up feeble in body and weak in mind ; the appetite in health is governed by the wants of the system, and ought not to be restricted, when the desire for food is inordinate, it is an evidence of disease, and should be regarded as such. The warmth imparted by the mother in nursing her babe is conducive to its health, and cannot safely be dispensed with ; no heat compensates for the loss of animal heat, and as sufficient for the child's comfort is not engendered by itself, its resource

is in its mother, and her arm becomes its best resting-place. Animals remain long with their tender young, to supply them with this necessary quality ; a hen gathers her chickens under her wings for this purpose : a child, or an animal, artificially brought up, suffers from being deprived of it, the digestion in them is imperfectly performed, and disease is consequent upon it. To a child of ten days old farinaceous food may be given twice a-day ; home-made bread, several days old, boiled in water in which aniseeds have been infused, is preferable to arrow-root, or other substances of a similar nature. The muscle, and bone, and sinew, and nerve of which the body consists, require to be sustained by elements of their own nature, which do not exist so much in simple, as in compound substances : hence a child may be long subsisted on bread, but cannot on jelly. An animal is made fat on food that does not impart strength, the same remark applies to a child ; the wants of the whole system must be considered in directing the kind of food, and not merely the ease of digesting it : at three months old, gravy, as it flows from the meat when brought to the table, may be added to boiled bread, or potatoes, and, as the child advances in age, a portion of animal food may be bruised to a pulp and given ; afterwards, the mother's discretion must be exercised, in increasing the solidity and strength of the means of subsistence : nature is a safe guide, and those do well who keep her injunctions in view ; she does not stint the young whose dependence is on her guidance, but gives with a liberal hand, and sickness alone prevents the gift from being received ; but sick-

ness is not a fit subject of imitation, food should not be as cautiously given to a healthy child, as to one that is sick, and yet this is much the practice, the consequences of sickness are made the guide ; but why endeavour to impose what implies a weak and disordered body ?—there cannot be safety in pursuing principles contrary to nature: enough is her maxim. The effects of too much food are less to be feared, and more readily removed, than those of too little. As soon as oatmeal agrees with a child, it may be advantageously given ; salt may also be freely used, as it assists in digestion, and contributes, with oatmeal, to the formation of bone.

This subject has been more fully considered in a former work, entitled “ *Anthropologia ; or Dissertations on the Form and Colour of the Person of Man,*” p. 72.

Of the state of the atmosphere in which children are best brought up, little can here be said, circumstances commonly determine the residence of the parents, and this dictates that of the children. The diseases of infancy have no influence over the character that can be anticipated or diverted, and therefore have no claim to our notice. Teething, however, is entitled to some attention. It is difficult to determine before hand, the child that will cut them with little difficulty, and therefore preventive means cannot be applied, but the subject is well entitled to attention : if, by previous treatment, the sorrows of teething can be lessened, a benefit will be gained to society. The state of the digestive organs indicate, at this season, the approach of danger, or the safety of

the child ; therefore commence at once in guarding the bowels from ordinary irritation, to accomplish this the following formula merits attention :—“ One drachm of Magnesia, one drachm of Tincture of Rheubarb, ten drops of Tincture of Opium, two drachms of Sugar, one ounce and a half of Anniseed Water, and one of Peppermint Water.” If, when the child is ten days old, five drops of this be given at bed-time, and continued nightly, increasing the dose to forty drops by the time the child has completed its fourth month, a good night will be secured to the mother and babe, and one cause of disease be prevented ; the bowels being kept free from irritation, greatly aids the health, and enables the child to bear pain : when this method is practised few deaths occur, and in every case much suffering is prevented. A mother will do well to inform herself of the diseases of childhood, as this alone will ensure to a skilful practitioner her confidence.

Passing from medicine, we resume the subject of diet, because character is, in a measure, dependent upon it. Animals, that in a high degree possess the dispositions and endowments of their species, have been bred so as to promote them: vegetable diet forms an energetic character in a warm climate, but the question is not whether the constitutions of the people of a country are adapted to its productions, but whether the style of living of the parents influence the children ? Suppose them to have lived generously, will the children be well-subsisted on a spare diet ?—will the child of an English gentleman suffer no injury, from becoming the inmate of an Irish cabin ? Nature

answers the question. A racer cannot be sustained in vigor by the food, or in health by the exposure to cold, which does not affect colts of an inferior breed, and, whatever be the breeding of the colt, a hardy bringing up is not the way to produce an elegant animal, its treatment must correspond to that of its progenitors. The means of subsistence of a child must also have a reference to that of its parents; if their table be well spread, their constitutions will be assimilated to that mode of living, and their general deportment characteristic of it; if, afterwards, they are limited to the ordinary fare of an Irish peasant, their mental energy diminishes, and their health suffers, and is not the constitution of their child one with their own, and subject to their necessities? does it inherit from its parents their acquired diseases, and not their physical character and tendencies? Is a certain description of food necessary to the parent, in consequence of an acquired disease, and will the children be exempt? A flock of lambs brought up on a worse pasture than their progenitors, do not equal them in their properties. If it be thus with animals, it is thus also with man—it is not the quantity of nutriment, but its quality that gives its fitness. The food that best produces animal heat, is that which is most desirable; not a fever, but the capacity to sustain cold. Salt and oil, or fat and oat-bread, are adapted to this end—hence salt-meat is suitable as a sea store. The Esquimaux drink sea-water, and seal's blood, before they go in search of that animal, and speak of its keeping up their warmth through the day, more than any other food.

Neither an English gentleman, nor his child, can be subsisted on potatoes, and retain their animal heat, but on this diet an Irish peasant is full of hilarity and strength. Locke supposes, that as the children of the poor grow up robust and strong on a spare diet, with thin clothing and shoes that admit water, that an opposite treatment had occasioned a different aspect in the children of the affluent, hence he advises for them the peasants' habits: had his inquiries been more extensive, his views would have altered—animal heat is the test of the sufficiency of food. Does not a Welch or Shetland poney grow fat where a different bred horse would suffer from cold, because the means of subsistence was not sufficient to maintain its heat.

The food on which the parents subsist, the habits they sustain, the intellect they possess, and the diseases to which they are subject, tend to fix in their children a bias to the same, and have a reference to their treatment—hence the children of educated parents require warm clothing and substantial food. The almost only antidote to hereditary disease is domestic treatment. To the scrophulous this remark is peculiarly applicable. Amiable, docile, and, in many respects estimable, this class of the community, from the delicacy of their skin, derive their indisposition; on them the summer's sun should shine, for the more they are tanned the more secure is their health—in winter their dress should be very warm. The benefit they derive from the sea is chiefly, I believe, owing to the moisture with which the atmosphere is filled; moisture gives the sun great power on the skin, a moist atmosphere, and a bright sun,

act as a dye—it would be well for many if it were permanent.

It does not appear from history that diet has an actual influence over the capacity, or even the disposition—the food a country best produces, is that which best subsists the people. Northern climates are better adapted to the growth of animals, than of esculant vegetables—thus the food of the people is pointed out. The Greeks and Persians, used chiefly vegetable food, and, like the Irish, were strong, animated, and brave. This mode of living had been continued for ages, and the constitutions of the people became adapted to it; an attempt to bring up children as the Esquimeaux bring up their's, on the flesh of the seal, would fail, those who lived would suffer in their national character. Food does not form the character, for neither cowardice nor courage are consequent on it, but on precept and example; food forms the constitution, not the mind, and if that which is given to the child, be not in accordance with that of the parents, it is injurious to its health, and energy, and form; and it cannot command that place in society which a child of meaner parents, differently brought up, is able to do. The English are the greatest eaters of animal food of any civilised nation, but they are certainly not inferior to any in their physical strength, or moral capacity; they might have been as great, had their diet been more spare, but the question before us is, how are the children to be treated? Why do families, just above want, bring up the greater number of children, in proportion to the births?—are they not fed more in accordance with the habits of their

parents? The children of the affluent do not require stimulants, or a refined system of cooking, but substantial and sufficient food, with exercise in the air.

Many duties devolve upon the father, but the mother holds the destinies of her children; she gives impression to the instinct, and energy to the mind—the power of the female has never been properly estimated, but its influence cannot be too forcibly inculcated; a good constitution is her first care.

THE SUBJECT CONTINUED.

The next is the moral habits, and mental strength of her child ; but on this subject she has no direction, no rule, no fixed principle, she desires, but cannot direct with any certainty of success, and can it be that Education is without any fixed principles ?—that an office is assigned to man which he cannot fill ? Born in ignorance, and disposed to vile and savage purposes, has he no appointed means of rescue ? Is Education without a principle ? Is it a conjectural art, which, when fully practised, leaves the character undecided ? It is not in accordance with the works of the Creator, that an end is required without the means ; that instinct should direct the physical system, but that, for the direction of the mind, no appointment is made. It is not so. There is in nature the Science of Education, or there would not be other sciences. Is man able to comprehend the laws of nature, and yet himself not be the subject of a law ? Is thought without a principle of being ?—has it no identity with the mind ? Chance and accident govern man, if his mind be subject to no law, if it be capable of receiving ideas, but not of applying them to a definite object for a definite purpose. Instinctive nature is open to our controul, and this is the main point of education, if due restraint and direction be

given, a fixed and definite character may be expected. Our domestic animals are subjected to this description of management with complete success—apply the principle to children, and the end is equally certain; they grow up the very character we aim to make them.

Nature has at once constituted the mother the nurse, and instructress of her children, and given a power over their dispositions and talents, by which she holds the destinies of her race, and is herself the lever which raises or sinks society; she moulds the physical powers of her children, and they are, in their moral and civil capacity, that which she impresses on them; if she forgoes her duty, and delegates her power, she is still responsible, the individual intrusted stamps her character upon them—a fact not sufficiently known, but of which the children of the higher classes are a striking illustration. Those who have the care of their infancy being themselves well-bred, the children receive a polish which is never obliterated, their easy deportment and the early growth of their minds is from this cause: when the servants are vulgar, the children over whom they have influence resemble them—it is in vain to expect a refined mind, if the first impressions be otherwise; the nursery, where these are received, lays the foundation of character deep and permanent, there any disposition may be so cultivated as to become permanent, and thus a definite character be formed.

Nature, through the whole extent of sensitive existences, claims this power, no being would be secure without it; the old teach the young in a mysterious

way to imitate them in all that is interesting in their existence—plastic nature admits and cherishes any impression from those that have the affections of the young. Mothers know this fact, and, in a measure, act upon it. Let them carry it out in the fullest measure, within their power, and higher than the Roman Matrons ever aspired they will rise, and be to the earth its greatest good. What mother is not ashamed of herself, if her child be a thief, or a liar, or disposed to any vice? Could she not have prevented it? A mother knows her power, she knows also the command, to bring up her child in the way it should go, and is this without a sanction? is the neglect without a fault? Where she discourtenances a vice, she may implant a virtue, for a child's moral habits involve a mother's responsibility—let her follow out her duty, and she will discover that the entire character of her child is under her controul. But, while she feels her power, she feels also her incompetency to exercise it; no rules are laid down, no theory advanced, no maxims have obtained credit, she is perplexed as to the means by which she can form her child, so that it shall maintain a given character. Rules and theories are unnecessary, let the example be before the child, and, more than this, let those who gain the affections of the child exemplify the character intended to be formed, and at five years old no power can destroy it—whence springs national character, but from the nursery?

The peasants of most European states are equally ignorant, and it seems to be this which qualifies them for their station, but for others it disqualifies. The

children of the poor are frequently entrusted to the care of those who are but a little older than themselves, the office is irksome, and no common tie is felt—an infant so circumstanced does not gain in sensibility. Children, nursed without energy or fondness, seldom cry, and as seldom smile, they have no attachments, and yet no desire of change, a street of cottages may be passed without an expression of sorrow, or of joy being heard. The Irish, however, are an exception; their children are nursed with great fondness, which marks its effects upon their animated countenances. A child, nursed with coldness, is amused by sitting on a bank of earth, or standing in the shade of a wall, that restless desire of action, felt by others, is unknown to it—a dull, inanimate countenance shows the little interest felt in another, or in surrounding objects, the gaiety of childhood has been suppressed by the oppressive treatment received; pieces of string are not eagerly picked up to convert into a whip, or a cast-off garment coveted to dress a doll, thus to pleasure they seem insensible, consequently a strong motive to action is unfelt by them, their play-things are marbles, whose only excitement is the gambling to which they lead: early initiated to labour, they do not become impatient of toil, and this is the only favorable circumstance relating to their condition, but if not early employed, they form worthless characters. No sense of the value of character, no laudable ambition guards their conduct, being without a predilection to any calling, they are prepared to acquire any art in which they may be

employed, and in moral habits they follow the example of their associates.

Passing from the cottage, where circumstances controul the conduct, we notice the more general effects of cold, phlegmatic nursing, a child so nursed is obstinate and selfish ; never having been the subject of discipline, apathy is mistaken for obedience, when required to act, the consequence of its bringing up appears ; scenes, on which others stop to gaze, excite no interest, a battle, or some circumstance of calamity, suit the mind, and the child hastens to be a spectator. Without such excitement, should there be an effort made to attract attention, it is with difficulty gained ; a direct look, or even a touch, is unobserved. The sensibility being blunted, the mind is slow of apprehension ; very frequently I have endeavoured to excite the attention of children so brought up, and have been as often surprised at the difficulty ; a quick boy turns his head at every sound, but these pause, as if to inquire the cause, even when a musket is fired. When employed in some business, such children are taught mechanically, neither memory nor understanding aid their labour, and when the daily toil is finished, the mind sinks into itself, and the ale-bench affords the highest source of gratification.

It may be asked, is such a character the effect of nursing, or is it constitutional ? It is the effect of nursing. The temperament may be melancholic or phlegmatic, but these are distinct from insensibility. The Irish are not dull, or the Scotch sprightly, although in temperament they are the same, their

bringing up has imposed a national character, which every individual exemplifies. The temperament may be supposed inimical to a general uniformity of character, but it is not the temperaments, or other such physical bias, on which character depends, but on the bringing up. We admit a difference in the capacity, and in the disposition of individuals, but this is in conformity to nature, it in no department is uniform; trees of the same species are not alike, yet they are sufficiently so to be identified. It is thus with nations, the same mode of bringing up produces the same general deportment. Children, nursed without energy, to whatever class of society they belong, have the same character, independent of that by which their nation is distinguished. The instinctive powers of a child, nursed with apathy, are dull, nothing is quickly apprehended, it wants life and energy, and thus it passes on in the even tenor of its way, unknowing and unknown.

The next class of nurses are those who watch over the babe with a constant, a sincere, and even with warm affection, but, from their quiet manners, excite no ardent emotion, no quick instinctive apprehension of passing scenes. The child is not sprightly, or quick, or alive to any impression, but it is not made dull and operose by oppression. The nurse absorbs the child's affections, on her its all centres, besides her no object gratifies, her spirit animates the child's, and it bears her likeness: no mean or selfish temper engenders petulance, by her management it has never been excited, nothing in the entire animal economy that is not invited by some immediate occasion,

becomes active, but amidst such excellencies the disposition is slothful and indifferent, its energies being unroused, the expressions of instinct are cold and uninteresting—such a child submissively waits where the nurse places it, its dependence is on her to direct in all it does, it is therefore but little interested in passing events.

Such treatment never creates brilliancy of intellect, never carries on the man to the fore-rank of his species, and here arises a question, ought our system to be as much perfected by ourselves as is within our power, or ought we to stint the mind, least it should aid the passions? The answer is obvious. Nothing has been given to be rejected, but to be improved, and exercised, and strengthened. Mind is especially thus circumstanced, and when the power of the parents, in controuling the passions of their children, and in fashioning the physical economy to be subservient to the mental shall be understood, the cultivation of the mind will be esteemed man's highest duty. Let parents glance through the families of their acquaintance, and they will find the children to correspond to the physical treatment they have received before their reason was exercised ; as the physical system is alone open to influence, act upon it, and success will follow, aim at a given temper, and disposition, and energy, and they will be formed. The nursery is now managed without a reference to the character in after life, and thus, the most influential season is lost, in which the force of instinct may be directed in laying the foundation of that portion of character, which comprises *the appetites and passions, and the general deportment*.

the man, exclusive of thought, is formed in infancy. A dull, inactive nurse occasions apathy in the child, she has never suffered the expression of its feelings, and when attempted, her chilling look has suspended them, so that the child is inanimate, because the instinctive feelings having been suppressed, has influence on the mental capacity ; there is in such a slowness of apprehension, a want of emulation of that which is procured as the price of hard study ; ideas become the child's more from habit, than from the readiness of the mind to grasp them, hence, when obtained, they are permanent, and in science the knowledge acquired is not profound, but practical.

This calm, unsolicitous, but yet in some way not unkind system of nursing, is one in which the greatest restraint is exercised, all is managed by rule, and order, and discipline, the child's inclination is never consulted, and therefore it ceases to have a will, the disposition is pressed into calmness, for the act of indulgence is unknown ; an onward, uniform, consistent course fixes a regular, placid, reputable, quiet character in the child, caution, good order, and to a certain extent, common sense, mark its conduct ; trained to habits of obedience, by the exercise of power without affection, submission assumes the character of a natural disposition, and a tame, but somewhat useful character in the man is the result.

Another class of nurses give their whole heart to their office, they love their charge, and nurse with all the fondness and spirit their nature admits ; some expression of rapture marks their return after a short absence, and then the heart pours forth its kindness,

while the babe leaps in her embraces ; its whole capacity is now lighted up, and expressions are uttered indicative of its happiness, a clap of the hands, or a loud and quick expression of the voice, or a rapid toss, quickens the faculties of the child and improves its health. Such a nurse gains the affections, and imparts her spirit and the elements of her character, one cannot be imparted, and not the other—daily observation shews that a child is lively or dull, stupid or intelligeni, as it is nursed.

It cannot be too fully impressed on the minds of Parents, that the nurse models the character of the child by her power over its physical nature ; by her impressions are fixed never to be obliterated, the impressions she gives, are first impressions, which are not evanesant like those of after life, the first motion of the principles of action is impelled by her, and it is difficult to direct them into another course—this mysterious power harmonises with the laws of nature, and the constitution of animal life. It has formerly been noticed, that the young of a tame animal are domestic when brought up by its dam, but reared in a forest by one of the same species, they acquire its character of wildness ; in both cases the character is imparted by the animal that directs, or, it may fitly be said, educates, the instinct of the young. The objects to be avoided or approached differ widely in the tame from those in the wild state, but in both cases the instruction is minute in its detail, every foe, and every friend, is pointed out to the young. An animal of the forest teaches its young to avoid a fire, or any object not the production of

nature, an inanimate body in motion is never seen by them without dread and apprehension, but the young of a tame animal is unalarmed—it has been taught confidence where the other learns caution.

The opposite characters formed by the wild and the tame animal, are an evidence of the extent of that description of influence and power of teaching, by which the young are not only prepared to meet existing difficulties and dangers, but are provided with dispositions and energies, which act in after life. An animal is seldom in error, each individual knows where to confide and when to suspect, and its disposition is fitted for either circumstance; if resistance is necessary, it prepares boldly for it, instinct inspires confidence, while instruction furnishes the means. Should the fact be discredited, and the power of creating the character be denied to the nurse, let it be made the subject of experiment. Bring up an animal apart from its species, or place the eggs of that suspicious bird, the wood-pigeon, under a domesticated bird, and those of the tame pigeon under the wild, and mark the respective influence of each; the wood-pigeon will not remain with the flock, because it is not of the same species, but its general habits will correspond with their's, and its wildness will be greatly diminished; while the tame pigeon, hatched by the stock-dove, will acquire part of its wildness. Without such power in the old animals, every race in the vicinity of man must become extinct; it is only the difficulty of deceiving, in order to destroy them, in which their safety consists: the cunning of all animals increases with

their danger, and the knowledge of one is imparted to the whole, and communicated to its young—an injured rat publishes its misfortunes, and, if they are unable to guard against a repetition, a council is held, and the whole body quit the premises in admirable order. The foxes became troublesome to the first visitors of Behring's Island, some were wounded, and the whole afterwards kept at a respectful distance.

But the subject has before been noticed, and now only needs to be appealed to as part of the economy of nature, which mothers are especially called upon to observe ; it is in vain to expect much from the school when nothing is done in the nursery. Our history abounds with instances of individuals, of inferior origin, rising in the state ; it was in the nursery, they learned to be great, the parents might be poor, but they were not mean, they might even be ignorant, but they had character—they acted a part, and were elevated in their sphere. A mother, who has herself a character to maintain, forms one in her child ; passions and dispositions, not yet in exercise, receive from her a rudimental form and bias, altogether inexplicable as to its mode of communication, or to its retention, but which are developed by circumstances, and rise into greatness by cultivation : a hen, by a certain expression, apprises its young of the presence of a bird of prey, some previous communication must have taught them that such a note indicated the approach of an enemy. It is this first teaching, which is the express, but inexplicable prerogative of the *mother*. The nurse of the child of a foreigner

imparts to it her national manners and character, although living with its parents and caressed by them; if the nurse, under such circumstances, impart one order of feelings, she may impart another—if she forms the child to her national habits, why not to her vulgarity and her moral feelings?

THE SUBJECT CONTINUED.

The power of the nurse has never become the subject of inquiry, but analogy and fact demand for it the most deliberate investigation. Is the whole world in a state of progression, so that no tribe is so savage as not gladly to receive an instructor, although with the belief that he will be the means of subverting all its institutions and habits? To increase in knowledge is the common effort of our race ; every nation is, in a greater or less degree, bending its attention to the subject, it is therefore of incalculable importance to ascertain whether education be a science or an art ; whether to instruct and form the mind be a provision of nature, or wholly the effect of design ; whether the parents, or the master, be accountable to society for the moral habits and mental strength of the child. If the mother sows the seed of greatness, or of folly, she claims, in her own person, a cultivation and a respect never yet received. Does she prepare the passions to obey the understanding, and the mind to receive instruction, with her then rests the character of the nation, and the worth of the individual. The higher a country advances in civilization, the more its peace and happiness depends on the morality of the people ; a civilized people, as France or Italy, without good morals, lose all the influence and power their

knowledge is calculated to bestow : one-third of the number of inhabitants, equally civilized but of moral habits, surpass and defeat them in all the engagements into which society enters—a civilized nation must become moral, or it loses its physical advantages, and sink into an object of contempt. That which is true of a nation is not less so of an individual. Did literature form the Patriot or the Moralist ? Were they the measure of each other, the schoolmaster would determine the national character ; but, important as his services may be, they are secondary, being only the ornament and strength, not the basis of character. The seeds of greatness are sown by the mother, in just principles, good order, and benevolence of disposition ; these are of her implanting ; if equipage, or splendour, or rank surrounds an infant, it regards them not—the heart of its mother imparts its impressions.

It may be urged that children do not act alike. It is not in accordance with nature that they should ; but the child of a Gentleman, whose mother was its nurse, will never be mistaken for a clown. The shades of character in the same family may be ascribed to various causes, to the health and to the temperaments ; one will have been a favourite, or have had a companion of different habits, or some similar circumstance will have occasioned the contrast. Let it only be admitted, that the wants and desires of a child are essentially the same as pervades all other parts of animated nature, and it may justly be inferred that it is governed by the same law, and yields to the same influences : one individual may be more complete than another, while all bear the same

general character. A weak and sickly child, the object of great parental solicitude and care, is regardless of toys, which captivate other children; when borne to the window, the passing scene has no charm to delude, no object to interest, sources from whence other children derive ideas, and are excited and made happy, are uninteresting to it; but it is the companion of its mother, and they hold intercourse, and their sympathies excite a deep and lasting influence, and although the child be too young to be interested in the ordinary occurrences of life, especially where reason is concerned, yet, by intercourse with its mother, it acquires a sagacity beyond its age.

This illustration of the influence those exercise who have the affections of a child is not a solitary, but a common influence, all nurses possess it and all children are open to it. By an active, energetic, warm nursing, the instinct is more perfectly roused, and the child more natural and completed than by any other means; nothing artificial keeps down its energies, while its playfulness and vivacity give interest to all surrounding objects, a knowledge of the properties of which it speedily acquires, instinctive quickness is the presage of mental when properly disciplined; and those parents, who are emulous of their children becoming active, energetic, distinguished characters, will pay due attention to the nursing, without this their hope will be blasted.

The next system, or order of nursing, is the indulgent. Some mothers, delighted with their babes and confining their attention to the present moment, *indulge their waywardness*, and fancy it promotes their

happiness. The dreams of happiness which such mothers have indulged not being realized, and having awoke to the business and cares of life, for which they are not qualified, they fix their morbid affections on their children ; no discipline is exercised, not even that simple but efficient and instinctive form of it, the holding of the hand, I say instinctive, because its intention is understood, children yield to the power exercised, other forms of discipline are cruelty, because the intention is unknown—they are not instinctive. The child that is gratified to appease its petulance, soon learns that to cry is to command, hence a fretful expression accompanies every request. The mother that connives at such a spirit mistakes the laws of nature, by divesting the child of its instinctive dependence on her, and placing it on itself, for in itself originates the motive and the means of its gratification ; acting for itself, and being independent of maternal controul, the whole family is occupied in administering to its pleasures. In this unnatural state sickness occurs, and now fresh difficulties arise ; the means of cure being ungrateful, new indulgencies are granted, and the servants are desired not to thwart the child's inclination. The period of dentition being passed, and the attention given the child in the nursery having infused life and vigor into the expressions of instinct, its sprightliness gives a charm to its actions ; but no rebuke is regarded, no command obeyed, this is overlooked, and the fond mother, pleased with the doings of her child, is proud in their exhibition to her friends, by whom his confidence is mistaken for good breeding ; but when desired to leave

the room a sullen countenance betokens resistance, and if a servant offers to conduct him, his opposition calls from the mother a promise of some present, if he will oblige her : having a full share of instinctive quickness, he readily learns parts of a play, or a few scraps of poetry, which being repeated to every visitor, the consequent flattery is alike agreeable to the mother and the child.

Another year or two is passed, and he enters with spirit into the sports and pastimes of his age ; his kites and tops amuse for a season, because of their superiority to those of his companions, but being soon tired of them, they are exchanged for some toy of inferior value ; then again he wants a kite, and applies to his mother, who, after a gentle rebuke, which he laughs at, complies with his request, but his father is not to know. His manners, as is common with spoiled children, are free and accessible, hence he is often invited to young parties, here he shines, and what he did and what he said is repeated in other companies ; should the servants remark on his giving wanton trouble, they are desired, in his presence, to treat him with respect.

At length the time arrives for his being sent to school, the novelty being over, he is disgusted with its controul, and, on complaining to his mother, is removed ; another school receives him, with instructions that he is not to be punished, the injunction is observed but still school is irksome, and he is placed under private tutors. At a proper age he goes to business, but the counting-house is not less irksome than the school, after trying several situations none

are found suited to his genius. His character now becomes evident, pleasure, not business, is the object of his pursuit ; his accessible disposition introduces him to various ranks of society, into any of whose pursuits of pleasure he enters heartily, he is a good shot and a skilful angler, and should his companions not be furnished with money, he bears the expense—compliments are so often paid to his urbanity of manners, that his parents discredit reports of his being obstinate, unmanageable, and lazy. As he advances in life, his love of pleasure leads him to contract debts, which are discharged and again renewed, till his father is embarrassed ; and, being denied the means of gratification, he reproaches his parents with unkindness : selfishness constitutes his entire character, no other being in the world interests him, he cares not for his parents' ruin—he is heartless, an object at once of pity and contempt.

Such is a brief outline of the transactions of the nursery. By the first mode, that in which the child is nursed without energy or affection, the result is often an infeebled body, not unfrequently the subject of rickets. Instinct is too much subdued to form an energetic character, but the individual is often well qualified to be an overseer, and to fill a place of trust—his passions do not bear down his judgment. The next system is that in which quietness is combined with affection. This system, in its best form, and under the most advantageous circumstances, is illustrated by the Society of Friends, the Quakers. The mother is so much with her child, that its disposition is modelled by her, and the example she sets, when

its influence is understood by other mothers, will not be disregarded. The power of instinct is in her fully illustrated, for on what other principle are the characteristic features of the society manifested by the children. The next system of nursing is that in which energy is combined with affection, By this mode instinct receives all the quickness of capacity of which it is susceptible, and, when aided by education, gives to society its most brilliant characters. The last form is that in which indulgence takes the place of duty, and, by offering no restraint, exhibits the true condition of man, and shows his dependence on others for his moral and intellectual being—as he is without discipline he is without affection. The nurse may have much personal worth, and her general conduct may be unexceptionable, but she abandons the child to its passions; her instinctive influence she is afraid to exercise, nothing improper has been taught by her, but then nothing proper has been imparted; the controul of instinct being withheld, the child directs itself, and consequently is selfish, and this character never forsakes it. Obedience is as essential to the child's happiness as it is to the formation of its character; the want of restraint is ruin—an indulged child is an abandoned man—obedience counteracts selfishness, which is never accomplished by other means—if discipline restrains, instinct models, if the schoolmaster enforces obedience, the nurse creates it—by the one the inclination resists, by the other it accords, the one is artificial the other natural.

It cannot be too forcibly impressed on parents, that obedience is the only presage of a valuable character;

it is the law of nature, where it is not enforced the child sustains the greatest possible injury, by such the jails are filled : go from culprit to culprit and ask the character of his education, it never enforced obedience. —it cannot be that a dutiful child becomes a thief, or an injurious character. When the influence nature endows the parents with, and which is bestowed on all sentient beings, is exercised, the young are not inferior to the old, the child to the parent. The Chinese are so well acquainted with parental influence, that the father of a profligate son, who commits an offence against society, is apprehended and punished for his neglect of duty.

FROM TWO YEARS ON TO THE AGE OF MATURITY.

To a child little more than two years old the love of order may be inculcated, by attention being directed to the derangement which a family necessarily creates: by the furniture being designedly displaced, and the child introduced to witness the confusion, and to point out the proper place for each article; or by the play-things being used with care, and put by with regularity; or by such other means as draw attention to the subject. Caution at the same age may also be taught; that instinctive fear, manifested by a child when in danger of falling from its nurse's arms, is a prelude to caution—hence, to warn of danger is all that is necessary to excite vigilance and circumspection.

These dispositions, by themselves, form a tame and insipid character, but when some powerful motive, as an exciting passion, stimulates to action, then their influence is most beneficially felt in forming a basis which ensures that weight of character, which energy, combined with prudence, always commands. If, for instance, to order and caution there be added patriotism or philanthropy, the danger of their intemperate use is guarded against, and the character, so circumstanced, is dignified by their controul—thus passion becomes a virtue.—but if, in the place of a moral vir-

tue, there be added to the love of order and caution, anger, this also will be restrained by them, and that which otherwise would have been injurious becomes at least inoffensive. The dispositions which actually form the man are not those which direct, but those which execute—not those which are conspicuous, but those which are concealed. Thus the love of order curbs the turbulence of passion, and before the powerful dispositions, which take a prominent part in many characters, are in existence, the mild and unostentatious passions and propensities of infancy are, by proper care, formed into valuable habits, and interwoven with the constitutional tendencies, and form a controuling check to those corrupt and turbulent passions which afterwards arise. The love of money is not known in infancy, but when it has come into existence, if not counteracted by the unostentatious virtues, generates the miser; revenge also is unfelt in childhood, but it drives a man to madness. There needs the operation of the more sedate dispositions to controul the violent, those which are sedate have their origin in infancy, and at that period open to the mother her brightest prospect and her most urgent duty; with its discharge rests the character of her child, around whom she can form a safeguard against the violence of those debasing passions, which are soon to occupy its breast: she is not ignorant that every uncontrouled passion degrades the mind, but by what means can a passion be controuled if not by her? Can it controul itself? Certainly it cannot. Passion has no power over itself, physical imbecility may lessen its strength, but the passion is the same; other

passions interpose, and are a check to each other, the whole are combined in one system, depending on each other, and on the due government of those which the more active passions call into exercise; these the mother nurtures, and they are the most certain security against their violence.

Order, caution, submission, and affection, are the prominent features of infancy, and, if these are judiciously cultivated, no vicious propensity can wholly throw down and subvert the character; but if infancy be passed by, and the propensities then in exercise are neglected, it will be difficult to implant a pre-determined character. The nursery is the great decider of a child's destiny. Ambition, and hatred, and anger, and lust, are repressed by the passions, which ought then to be cultivated?—If they reign they prostrate the character.

The discipline of the nursery, whatever it be, continues in effect till the child is received into a school, from which source more is expected than can be realized—as a whole, the duty of the master is fully discharged. Bad school-fellows, and bad teachers, are the commonly assigned causes of immorality in youths, but the evil has been done at home; a bad-disposed boy is avoided by one of a different character, and no master can pay individual attention to all his scholars—if that has not been paid by the parents, it cannot be done by the master, and ought not to be expected.

The Infant School promises a more decided moral influence than schools designed for older children. The great source of benefit in these schools is from

the personal character of the teacher ; that which is taught is of some importance, as it lessens the labour of the Sunday School, but in itself is of little value, in a few months it has escaped from the memory. The children of an infant school look to their teacher with the utmost deference and affection, and therefore their teacher ought to be a female, for she alone can respond to their feelings ; and there can be no doubt, from the circumstances of their personal home, that the superior deportment and greater attention of the governess, gives her a powerful influence over their dispositions and general character—it is what is initiated, rather than what is heard, that gives the school its importance. These schools, as they are now conducted, are only practicable in very populous neighbourhoods, but if a female taught forty scholars in a cottage the end would probably be better answered, and neighbourhoods might be benefited that are now excluded—many individuals would patronize and support a school, with a female conductor of their appointing, who feel little interest in a larger school. Infant schools are inestimable, from the facilities they afford of giving good early impressions, and of inducing early prepossessions, such children are prepared, with great credit to themselves, to occupy the station they are calculated to fill, and evidence an advance in the moral character of the nation, a circumstance essential to its welfare. Infant Schools are also available to another great national good. The children of our Eastern Colonies may, by their general introduction, be taught the English language : children at two years old will very speedily attain it

with their own, by the school being conducted alternately in both languages.

Next after the instruction of the school, parents rely on the character of their children being formed by Religion. To form excellent moral habits is the highest duty of the parents, and one to which they are competent, beyond this parents have no power ; they may teach the doctrines of the Christian Religion, but they cannot impart its spirit, but, when moral precepts are neglected at home, it is only in special cases that they are gained by other means—a Christian is indeed a rare character, but its imitation is the subject of Education. The maxims of our religion are so well adapted to promote the happiness of society, that where its spirit is unknown its maxims are inculcated. The Genius of Christianity alone produces the Gentleman ; yes, from this origin it was derived, before its introduction the character was unknown. The sterner virtues, and those which spring from selfishness, were fostered by the nations of antiquity. Neither the Greeks, nor Romans, nor Persians were polite, in our acceptation of the term ; neither are the Chinese or Hindoos, nor any other existing nation, unacquainted with Christianity. “ To be courteous, gentle, kind-hearted, easily-entreated, condescending to men of low degree, in honor preferring one another, to be disinterested,” are precepts found only in the Scriptures, but they form the gentleman—unfortunately the counterfeit is more often seen than the real character. Men, destitute of all moral principle, in the higher ranks of society, are distinguished by wearing the garb, which ought more especially to

ornament the best of men ; to the disgrace of the Christian public, but little of the spirit of their religion is seen in them—in its counterfeit its semblance can be better traced, but the dignity of the Christian character is rarely seen. A gentleman wounds the feelings of no one, while he cultivates the good will of all—a Christian in spirit, is a gentleman in practice.

The forming of the character is most justly ascribed to Education. It can impose the manners of the Gentleman, while the heart is full of deceit and treachery ; what then can it not do short of renovating the mind ? Religion it cannot impart, but it may its counterfeit—an injudicious endeavour to impart the one, impresses the other. Let religion be regarded in the sublimity of its nature, as impressing on man a new destiny and a higher order of being, and it will have its proper place ; it is imperative on parents, as a part of ordinary education, to form in their children its moral habits, which is practicable to an extent not commonly apprehended. Its principles and its doctrines should be taught with much solemnity and reverence.

It is unnecessary to pursue the subject further, the principle must be understood by the reader ; and, if acted on, the general character of the children will correspond with the efforts of the parents.

OF THE EDUCATION OF THE MIND.

Metaphysicians, of every age, have committed one common, but fatal mistake, in dividing the subjects of philosophical inquiry into matter and mind, and in assuming the most rigid definitions as axioms strictly to be adhered to. "If I am asked," (I quote from Mr. Stewart's Elements, vol. 1. p. 3,) "what I mean by matter, I can only explain myself by saying it is that which is extended, figured, coloured, &c. * * *

The case is exactly similar with respect to mind; we are not immediately conscious of its existence, but we are conscious of sensation, thought, and volition, which implies the existence of something that feels, thinks, and wills." Thus the mind is made to consist of all that constitutes man, except inert matter, for all sensation is made part of mind. Dr. Reid, Dr. Browne, and Dr. Payne, indeed all writers, ancient and modern, virtually admit this definition. To attempt the analysis of such a mind, is as vain as to inquire in what other form of organized matter mind could exist, seeing that a slight derangement of the body, which it now inhabits, causes insanity, yet two thousand years have been consumed in this attempt, by men the most talented the world has yet produced; but their efforts have described a circle, and at the same point at which the inquiry began, it waits another series of

adventurers, who may proceed an equal length with equal success, unless the definition be revised, and man be admitted to be the subject of another influence.

So long as the animal and mental feelings are confounded, and regarded as one, the character of the mind can never be known, nor its immortality philosophically determined, nor a scientific system of education established. By a scientific education I wish to be understood, as meaning a system by which, the desire of the parents shall be realised in the character of their child : education cannot decide the strength of the mind, nor can it decide its religious state, but it is competent to develop the powers the mind does possess, and to ensure habits of virtue. Every disposition that is under the influence of instinct is the subject of education, so that a child, by its bringing up, may be qualified to fill a station of daring adventure, or of patient waiting, of energy or of ease, of trust or of profligacy : it may be made the thief, or the honest man, the drunkard, or the habitually temperate, the man of honor, or the reckless villain—every virtue grows or is repressed by education. It is not because one child is originally, and by nature, worse than another that is more bent on wickedness and disobedience, but because it has been more exposed to contaminating influences—immoral practices are not extenuated by an innate disposition to them, or penal laws would be themselves the crime—education is the appointed barrier against vice, it subdues the evils that arise from the natural incapacity of the mind to act upon itself. That education is the means appointed of Providence to form and guard the

character, is evident from the fact, that it is not in the nature of religious influence to be uniform in its operation, sometimes it is withdrawn, and what then sustains the character but the results of education, or, in other words, but the habit of the mind formed on just principles—so that at once the principle and the habit are a stay to the mind. A mind is beneficially enlarged by being exercised on itself, when the dispositions, dependent on instinct, have been properly disciplined ; without this, an enlarged mind is an increase of evil, for knowledge and virtue are not consequent on each other—the judgment may approve of virtue, but, to use the language of Dr. Reid, “ The passions are stronger than reason.” They, consequently, sometimes triumph over it, and require a separate management, and as tricter discipline; the mind needs an accumulation not of ideas only, but of principles, that it may be strengthened—good habits, and a good memory are sufficient acquirements, to transact the affairs of life, when aided by the portion of intellect common to the nation, but to dive into the principles of nature, so as to comprehend their cause, requires a mind to dwell on the information it possesses.

In cultivating the mind one rule only is necessary—study a subject till its practical utility is ascertained. Every subject on which the mind can be employed is allied to some practical benefit, some useful science, man is not called to labour without reward, there is no subject that is purely speculative. But, while the sciences are fit to occupy the mind, its destiny is its great object of attention ; a mind, of a limited capacity, is sufficient to possess all that can be

attained ; any science can be taught to almost every individual of a school, and, when every science is known, can that mind advance no further ? If it is incapable of further exertion, it will be just to infer that, like the passions, or any other part of our economy, we know the extent to which it can be carried, and that beyond all is confusion and madness—every passion is limited, every joy and every sorrow has its boundary. But, if the mind is invigorated by all the knowledge it can gain, and is qualified by this very circumstance for, and earnestly desires further and higher knowledge, then, the mind is immortal, and its great study is itself, in relation to this state. The schools of Greece taught philosophy—those of Rome appear to have had a more direct reference to eloquence—those of modern Europe are formed on the same principle, to obtain the same end. The study of language, so as to obtain a copious vocabulary, seems the chief object aimed at, amendments might be suggested, but the subject will dictate them, should the principle be admitted.

CONCLUSION.

As this work is not designed to settle a disputed theory, or determine some nice and subtle distinction, or to fill up a chasm left by others, a studied accuracy of language, which such a discussion might require, is unnecessary. Those writers, who have attempted to analyse the mind, have found every language bald and meagre, and inadequate to their purpose, but the present address is to readers of ordinary capacity, and requires only a familiar style. Education must long since have been established as a science, had mental philosophers directed their attention to the subject, but, unfortunately for society, it has never been attempted ; hitherto Education has been conducted only as an art. Should the distinction between Instinct and Reason, which is the object of the present work to point out and establish, be received, and Instinct admitted to be one of the laws of the universe, a scientific system of education will be the natural result. As a law acting on vegetable fibre, instinct causes it to discharge the functions proper to the periods of growth, maturity, and decay, and although death is inevitable, yet, by the same instinctive influence, a succession of the species is maintained. If such be the power of instinct over the vegetable

fibre, its operation on the animal system, assisted by the senses, is less difficult to point out.

At the head of the animal creation is man, at the other extremity is a worm. Should it be admitted that instinct governs organized matter, not capriciously, but as a law, the moral improvement of man will be secured on a basis, and promoted by means at the command not of the rich, or of those who are favorably circumstanced, but of the race, and man will rise above the rank of animals, by the moral character which instinct, under parental discipline, can produce only in him. By thus separating the endowments of man, and placing each under its own law, he is seen as a whole ; the animal body, with its functions, and its capacity of imitation, and its readiness to assume the character discipline may impose, adapts man to the circumstances of time ; but as he acts his part, during the period of three score years and ten, he is ever aiming at an improvement in his condition, nothing satisfies him ; his life is spent in this one effort of improvement. No object presents itself as of half the worth as his moral habits, for on them is founded the benefit of every other improvement ; and as the attainment of this, is more the effect of discipline, than of sentiment—the duty of parents on this subject is imperative. This being properly attended to, the mind stands forth in its own nature, endowed with its own capacity as the discerner of truth, and as truth is a system under the safeguard of a law, man's security against error is established, for error cannot obscure mind disengaged from sense.

The two influences which exist in man, acting together, darken each other, but when death separates them, error ceases, then truth, only truth, exists; and no truth is without its relation to another truth, and thus the mind must increase for ever, if it meets with truth to add to its strength—when instinct is withdrawn man will then see himself by the light of his own mind. In Education, two objects present themselves; the one respects matter governed by instinct, the other respects mind dependent upon truth.

ERRATA.

In page 154, line 23, after the word "*but*" read "*one-half*."—The other errors, typographical and otherwise, are such as the reader will be able to correct.



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